Academic Calendars

2017 – 2018

Fall Quarter 2017
Quarter begins ............................. September 25
Instruction begins ......................... September 28
Veterans Day holiday .................... November 10
Thanksgiving holiday .................. November 23–24
Instruction ends .......................... December 8
Common final examinations .......... December 9–10
Final examinations ...................... December 11–15
Quarter ends ............................... December 15
Christmas holiday ...................... December 25–26
New Year's holiday ..................... December 29–January 1
Winter campus closure ............... TBD

Winter Quarter 2018
Quarter begins ............................. January 3
Instruction begins ......................... January 8
Martin Luther King, Jr. holiday ....... January 15
Presidents' Day holiday ................ February 19
Instruction ends .......................... March 16
Common final examinations .......... March 17–18
Final examinations ...................... March 19–23
Quarter ends ............................... March 23

Spring Quarter 2018
Quarter begins ............................. March 28
César Chávez holiday ................. March 30
Instruction begins ......................... April 2
Memorial Day holiday ................. May 28
Instruction ends .......................... June 8
Common final examinations .......... June 9–10
Final examinations ...................... June 11–15
Quarter ends ............................... June 15
Commencement ceremonies .......... June 15–17

Fall Quarter 2018
Quarter begins ............................. September 24
Instruction begins ......................... September 27
Veterans Day holiday .................... November 12
Thanksgiving holiday .................. November 22–23
Instruction ends .......................... December 7
Common final examinations .......... December 8–9
Final examinations ...................... December 10–14
Quarter ends ............................... December 14
Christmas holiday ...................... December 24–25
New Year's holiday ..................... December 31–January 1
Winter campus closure ............... TBD

Winter Quarter 2019
Quarter begins ............................. January 2
Instruction begins ......................... January 7
Martin Luther King, Jr. holiday ....... January 21
Presidents' Day holiday ................ February 18
Instruction ends .......................... March 15
Common final examinations .......... March 16–17
Final examinations ...................... March 18–22
Quarter ends ............................... March 22

Spring Quarter 2019
Quarter begins ............................. March 27
César Chávez holiday ................. March 29
Instruction begins ......................... April 1
Memorial Day holiday ................. May 27
Instruction ends .......................... June 7
Common final examinations .......... June 8–9
Final examinations ...................... June 10–14
Quarter ends ............................... June 14
Commencement ceremonies .......... June 14–16

Online Publications
This UCLA General Catalog is published annually online. See the Registrar's website for current detailed information about registration, enrollment, fees, deadlines, updated course descriptions, and other academic information. Courses offered each term can be viewed on the Schedule of Classes.
From the UCLA Chancellor

This Catalog describes the almost endless academic choices available to you at UCLA. Choose from 5,000 courses each term, 126 undergraduate majors, 100 master's and professional programs, 111 doctoral and professional programs, and 93 minors as you build a course of study that suits your own interests and aspirations. The size and scope of our campus enables us to offer you a remarkable range of academic possibilities. At the same time, almost 70 percent of our undergraduate classes have fewer than 30 students so you can get to know your professors and classmates.

Your fellow students at UCLA come from incredibly diverse backgrounds. Those admitted to our freshman class for 2017-18 are from 50 states and 116 countries. But, like you, all of them are driven by an unwavering commitment to excellence and a determination to make a difference wherever they go.

Our faculty of more than 4,700 is made up of renowned scholars who are highly regarded as leaders in their fields. Undergraduates, as well as graduate students, have opportunities to study with top professors and conduct research under their guidance.

This Catalog includes opportunities for graduate and undergraduate students, including those that offer priority enrollment for lower division students. Among these are Fiat Lux Seminars, which are small classes in a broad range of subjects; Freshman Clusters, which engage students in yearlong, team-taught interdisciplinary study of timely topics; and advanced research opportunities.

Our campus is a vibrant community made up of forward-thinking achievers who think outside traditional academic boundaries and share an exuberant sense of possibility. The UCLA experience prepares leaders who go on to excel all over the world.

I invite you to explore UCLA beyond the contents of this Catalog. Visit us on campus, or online at http://www.ucla.edu.

Gene D. Block
Chancellor
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College of Letters and Science

African American Studies Department
  African American Studies ........................................... BA, MA

African Studies Interdepartmental Program
  African Studies ......................................................... MA

American Indian Studies Interdepartmental Program
  American Indian Studies ............................................... BA, MA

Anthropology Department
  Anthropology ............................................................. BA, BS, MA, PhD

Archaeology Interdepartmental Program
  Archaeology ............................................................. MA, CPhil, PhD

Art History Department
  Art History ............................................................... BA, MA, PhD

Asian American Studies Department
  Asian American Studies .............................................. BA, MA

Asian Languages and Cultures Department
  Asian Humanities ......................................................... BA
  Asian Languages and Cultures ....................................... MA, CPhil, PhD
  Asian Languages and Linguistics .................................... BA
  Asian Religions .......................................................... BA
  Chinese ........................................................................ BA
  Japanese ......................................................................... BA
  Korean .......................................................................... BA
  Teaching Asian Languages ................................................ MA

Atmospheric and Oceanic Sciences Department
  Atmospheric, Oceanic, and Environmental Sciences ........ BS
  Atmospheric and Oceanic Sciences ................................. MS, CPhil, PhD

Bioinformatics Interdepartmental Program
  Bioinformatics .............................................................. MS, PhD

Chemistry and Biochemistry Department
  Biochemistry ................................................................. BS
  Biochemistry, Molecular and Structural Biology ................. MS, CPhil, PhD
  Chemistry ..................................................................... BS, MS, CPhil, PhD
  Chemistry/Materials Science .......................................... BS
  General Chemistry ......................................................... BS

Chicana and Chicano Studies Department, César E. Chávez
  Chicana and Chicano Studies ............................................. BA, MA, PhD

Comparative Literature Department
  Comparative Literature ............................................... BA, MA, CPhil, PhD

Computational and Systems Biology Interdepartmental Program
  Computational and Systems Biology ................................. BS

Conservation of Archaeological and Ethnographic Materials Interdepartmental Program
  Conservation of Archaeological and Ethnographic Materials ........ MA
  Conservation of Material Culture ....................................... MS, PhD

Earth, Planetary, and Space Sciences Department
  Earth and Environmental Science ..................................... BA
  Engineering Geology ..................................................... BS
  Geochemistry ............................................................... MS, CPhil, PhD
  Geology ...................................................................... BS, MS, CPhil, PhD
  Geophysics ..................................................................... BS
  Geophysics and Space Physics ......................................... MS, PhD

East Asian Studies Interdepartmental Program
  East Asian Studies .......................................................... MA

Ecology and Evolutionary Biology Department
  Biology ........................................................................ BS, MS, CPhil, PhD
  Ecology, Behavior, and Evolution ..................................... BS
  Marine Biology .............................................................. BS

Economics Department
  Applied Economics ....................................................... MAE
  Business Economics ..................................................... BA
  Economics ................................................................. BA, MA, CPhil, PhD

English Department
  American Literature and Culture ...................................... BA
  English .......................................................................... BA, MA, CPhil, PhD

Environment and Sustainability, Institute of the Center for Interdisciplinary Instruction
  Environment and Sustainability ....................................... MS, PhD
  Environmental Science .................................................. BS
  Environmental Science and Engineering ........................ DEnv

French and Francophone Studies Department
  French .......................................................................... BA
  French and Francophone Studies .................................... MA, CPhil, PhD
  French and Linguistics .................................................. BA

Gender Studies Department
  Gender Studies ............................................................. BA, MA, PhD

Geography Department
  Geography ................................................................. BA, MA, CPhil, PhD
  Geography/Environmental Studies ................................. BA
Germanic Languages Department
Germanic Languages ............................... BA
Germanic Language ............................... MA, CPhil, PhD
Nordic Studies ...................................... BA
Scandinavian ......................................... MA
Scandinavian Languages and Cultures ............ BA

Global Studies Interdepartmental Program
Global Studies ...................................... BA

History Department
History ................................................. BA, MA, CPhil, PhD

Individual Field of Concentration
Individual Field of Concentration ................. BA, BS

Indo-European Studies Interdepartmental Program
Indo-European Studies ............................. CPhil, PhD

Integrative Biology and Physiology Department
Physiological Science ................................ BS, MS

International and Area Studies Interdepartmental Program
African and Middle Eastern Studies ................ BA
Asian Studies ........................................ BA
European Studies .................................... BA
Latin American Studies ............................ BA

International Development Studies Interdepartmental Program
International Development Studies ............... BA

Italian Department
Italian ................................................ BA, MA, CPhil, PhD
Italian and Special Fields ........................ BA

Latin American Studies Interdepartmental Program
Latin American Studies ............................ MA

Linguistics Department
Applied Linguistics ................................ BA
Linguistics ............................................ BA, MA, CPhil, PhD
Linguistics and Anthropology ..................... BA
Linguistics and Asian Languages and Cultures ... BA
Linguistics and Computer Science ................. BA
Linguistics and English ............................. BA
Linguistics and French ............................... BA
Linguistics and Italian ............................... BA
Linguistics and Philosophy ........................ BA
Linguistics and Psychology ........................ BA
Linguistics and Scandinavian Languages ........ BA
Linguistics and Spanish ............................ BA

Mathematics Department
Applied Mathematics .............................. BS
Financial Actuarial Mathematics ................. BS
Mathematics .......................................... BS, MA, MAT, CPhil, PhD
Mathematics/Applied Science ..................... BA
Mathematics for Teaching ........................ BS
Mathematics of Computation ...................... BS

Mathematics/Atmospheric and Oceanic Sciences Interdepartmental Program
Mathematics/Atmospheric and Oceanic Sciences ... BS

Mathematics/Economics Interdepartmental Program
Mathematics/Economics ............................ BS

Microbiology, Immunology, and Molecular Genesics Department
Microbiology, Immunology, and Molecular Genetics ................................. BS, MS, PhD

Molecular Biology Interdepartmental Program
Molecular Biology .................................... PhD

Molecular, Cell, and Developmental Biology Department
Molecular, Cell, and Developmental Biology ................................. BS, MA, CPhil, PhD

Molecular, Cellular, and Integrative Physiology Interdepartmental Program
Molecular, Cellular, and Integrative Physiology .................. PhD

Near Eastern Languages and Cultures Department
Ancient Near East and Egyptology ............... BA
Arabic ................................................ BA
Iranian Studies ...................................... BA
Islamic Studies ..................................... MA, CPhil, PhD
Jewish Studies ..................................... BA
Middle Eastern Studies ............................ BA
Near Eastern Languages and Cultures ........... MA, CPhil, PhD

Neuroscience Interdepartmental Program
Neuroscience ....................................... BA

Philosophy Department
Philosophy .......................................... BA, MA, CPhil, PhD

Physics and Astronomy Department
Astronomy ............................................ MS, MAT, PhD
Astrophysics ........................................ BS
Biophysics .......................................... BS
Physics .............................................. BA, BS, MS, MAT, PhD

Political Science Department
Political Science .................................... BA, MA, CPhil, PhD

Psychology Department
Cognitive Science .................................... BS
Psychobiology ....................................... BS
Psychology .......................................... BA, MA, CPhil, PhD

Slavic, East European, and Eurasian Languages and Cultures Department
Central and East European Languages and Cultures . BA
Russian Language and Literature ................. BA
Russian Studies ..................................... BA
Slavic, East European, and Eurasian Languages and Cultures ................................. MA, CPhil, PhD

Social Science Interdepartmental Program
Social Science ....................................... MSS

Society and Genetics, Institute for Center for Interdisciplinary Instruction
Human Biology and Society ....................... BA, BS

Sociology Department
Sociology ............................................ BA, MA, CPhil, PhD

Spanish and Portuguese Department
Hispanic Languages and Literatures ............... CPhil, PhD
Portuguese .......................................... BA, MA
Spanish ....................................................... BA, MA
Spanish and Community and Culture .......... BA
Spanish and Linguistics ............................... BA
Spanish and Portuguese ............................... BA

Statistics Department
Applied Statistics ........................................... MAS
Statistics .................................................. BS, MS, CPhil, PhD

Study of Religion Interdepartmental Program
Study of Religion ........................................... BA

David Geffen School of Medicine
Biological Chemistry Department
Biological Chemistry ....................................... MS, PhD

Biomathematics Department
Biomathematics ............................................. MS, PhD
Clinical Research ............................................. MS

Human Genetics Department
Human Genetics ............................................. MS, PhD

Medicine Schoolwide Program
Medicine .................................................... MD

Microbiology, Immunology, and Molecular Genetics Department
Microbiology, Immunology, and Molecular Genetics ................................ MS, PhD

Molecular and Medical Pharmacology Department
Molecular and Medical Pharmacology ............... MS, PhD

Molecular, Cellular, and Integrative Physiology Interdepartmental Program
Molecular, Cellular, and Integrative Physiology ... PhD

Neurobiology Department
Neurobiology ............................................... MS, CPhil, PhD

Neuroscience Interdepartmental Program
Neuroscience ............................................... PhD

Pathology and Laboratory Medicine Department
Cellular and Molecular Pathology ....................... MS, PhD

Physics and Biology in Medicine Interdepartmental Program
Physics and Biology in Medicine ....................... MS, PhD

Graduate School of Education and Information Studies
Education Department
Education ..................................................... MA, MEd, EdD, PhD
Educational Administration ............................. Joint EdD with UCI
Special Education ......................................... Joint PhD with CSULA

Information Studies Department
Information Studies .......................................... PhD
Library and Information Science ......................... MLIS

Henry Samueli School of Engineering and Applied Science
Bioengineering Department
Bioengineering ............................................... BS, MS, PhD

Chemical and Biomolecular Engineering Department
Chemical Engineering ...................................... BS, MS, PhD

Civil and Environmental Engineering Department
Civil Engineering .......................................... BS, MS, PhD

Computer Science Department
Computer Science ......................................... BS, MS, PhD
Computer Science and Engineering .................. BS

Electrical Engineering Department
Electrical Engineering ...................................... BS, MS, PhD

Engineering Schoolwide Programs
Engineering .................................................. MEngr, MS, Engr
Engineering—Aerospace .................................. MS
Engineering—Computer Networking ................. MS
Engineering—Electrical .................................... MS
Engineering—Electronic Materials ..................... MS
Engineering—Integrated Circuits ......................... MS
Engineering—Manufacturing and Design ............. MS
Engineering—Materials Science ......................... MS
Engineering—Mechanical ................................ MS
Engineering—Signal Processing and Communications MS
Engineering—Structural Materials ..................... MS

Materials Science and Engineering Department
Materials Engineering ....................................... BS
Materials Science and Engineering .................... MS, PhD

Mechanical and Aerospace Engineering Department
Aerospace Engineering ..................................... BS, MS, PhD
Manufacturing Engineering ............................... MS
Mechanical Engineering .................................. BS, MS, PhD

Herb Alpert School of Music
Ethnomusicology Department
Ethnomusicology .......................................... BA, MA, CPhil, PhD

Music Department
Music ....................................................... BA, MA, MM, DMA, CPhil, PhD

Musicology Department
Music History ............................................... BA
Musicology .................................................. MA, CPhil, PhD

John E. Anderson Graduate School of Management
Management Department
Business Administration ................................. MBA, EMBA, FEMBA, GEMBA
Business Analytics ......................................... MS
Financial Engineering ...................................... MFE
Management ............................................... MS, CPhil, PhD
Jonathan and Karin Fielding School of Public Health

Biostatistics Department
  Biostatistics ........................................MS, PhD
Community Health Sciences Department
  Community Health Sciences ............... MPH-HP, MS, PhD
Environmental Health Sciences Department
  Environmental Health Sciences .......... MS, PhD
Epidemiology Department
  Epidemiology ....................................MS, PhD
Health Policy and Management Department
  Health Policy and Management .......... EMPH, MS, PhD
Molecular Toxicology Interdepartmental Program
  Molecular Toxicology .........................PhD
Public Health Schoolwide Programs
  Public Health ................................... MPH, DrPH

Meyer and Renee Luskin School of Public Affairs

Public Policy Department
  Public Policy .......................................MPP
Social Welfare Department
  Social Welfare .................................. MSW, PhD
Urban Planning Department
  Urban and Regional Planning ........... MURP
  Urban Planning .............................. PhD

School of the Arts and Architecture

Architecture and Urban Design Department
  Architectural Studies ....................... BA
  Architecture ................................. MArch I, MArch II, MA, PhD
Art Department
  Art .................................................. BA, MFA
Design | Media Arts Department
  Design | Media Arts ............................ BA, MFA
Individual Field
  Individual Field ............................. BA
World Arts and Cultures/Dance Department
  Culture and Performance ................ MA, PhD
  Dance ............................................. BA, MFA
  World Arts and Cultures .................. BA

School of Dentistry

Dentistry Department
  Dental Surgery ................................. DDS
Oral Biology Section
  Oral Biology .................................... MS, PhD

School of Law

Law Department
  Law ................................................ LLM, JD, SJD

School of Nursing

Nursing Department
  Nursing ........................................... BS, MS, MSN, PhD

School of Theater, Film, and Television

Film, Television, and Digital Media Department
  Film and Television ........................ BA, MA, MFA, CPhil, PhD
Individual Field
  Individual Field .............................. BA
Theater Department
  Theater ......................................... BA, MFA
  Theater and Performance Studies ....... CPhil, PhD

UNDERGRADUATE MINORS AND SPECIALIZATIONS

Minors

College of Letters and Science
  African American Studies
  African and Middle Eastern Studies
  African Studies
  American Indian Studies
  Ancient Near East and Egyptology
  Anthropology
  Applied Developmental Psychology
  Arabic and Islamic Studies
  Armenian Studies
  Art History
  Asian American Studies
  Asian Humanities
  Asian Languages
  Atmospheric and Oceanic Sciences
  Biomedical Research
  Central and East European Studies
  Chicana and Chicano Studies
  Civic Engagement
  Classical Civilization
  Cognitive Science
  Comparative Literature
  Conservation Biology
  Digital Humanities
  Disability Studies
  Earth and Environmental Science
  East Asian Studies
  English
  Environmental Systems and Society
  European Studies
Evolutionary Medicine
Food Studies
French
Gender Studies
Geochemistry
Geography
Geography/Environmental Studies
Geology
Geophysics and Planetary Physics
Geospatial Information Systems and Technologies
German
Global Health
Global Studies
Greek
Hebrew and Jewish Studies
History
History of Science and Medicine
International Migration Studies
Iranian Studies
Israel Studies
Italian
Labor and Workplace Studies
Latin
Latin American Studies
Lesbian, Gay, Bisexual, Transgender, and Queer Studies
Linguistics
Literature and Environment
Mathematical Biology
Mathematics
Mexican Studies
Middle Eastern Studies
Neuroscience
Philosophy
Portuguese
Russian Language
Russian Literature
Russian Studies
Scandinavian
Science Education
Social Thought
Society and Genetics
South Asian Studies
Southeast Asian Studies
Spanish
Spanish Linguistics
Statistics
Structural Biology
Study of Religion
Systems Biology
Teaching Secondary Mathematics
Graduate School of Education and Information Studies
Education Studies
Henry Samueli School of Engineering and Applied Science
Bioinformatics

Environmental Engineering
Herb Alpert School of Music
Music History
Music Industry
John E. Anderson Graduate School of Management
Accounting
Entrepreneurship
Jonathan and Karin Fielding School of Public Health
Public Health
Meyer and Renee Luskin School of Public Affairs
Gerontology
Public Affairs
Urban and Regional Studies
School of the Arts and Architecture
Visual and Performing Arts Education
School of Theater, Film, and Television
Film, Television, and Digital Media
Theater

Computing Specializations
College of Letters and Science
Chemistry
Communication
Ecology and Evolutionary Biology
Linguistics
Mathematics
Mathematics/Economics
Molecular, Cell, and Developmental Biology
Psychology
Sociology

GRADUATE CONCURRENT AND ARTICULATED DEGREES

Inquiries about concurrent and articulated degree programs should be directed to graduate advisers in the departments and schools involved. Students should contact Graduate Admissions/Student and Academic Affairs for information on designing articulated programs.

Concurrent Degrees
Concurrent degree programs allow students to reduce the number of courses required for two degrees, since some courses may apply to both degrees.

African American Studies Interdepartmental MA/Law JD
African Studies Interdepartmental MA/Public Health MPH
American Indian Studies Interdepartmental MA/Law JD
Architecture MArch I/Urban Planning MURP
Asian American Studies Interdepartmental MA/
Public Health MPH
Asian American Studies Interdepartmental MA/
Social Welfare MSW

10 / Majors and Degrees
Community Health Sciences MPH/Urban Planning MURP
Education MA, PhD, MEd, or EdD/Law JD
Environmental Health Sciences MPH/Urban Planning . . . MURP
Latin American Studies Interdepartmental MA/Urban . . . Planning MURP
Management MBA/Computer Science MS
Management MBA/Dentistry DDS
Management MBA/Latin American Studies Interdepartmental MA
Management MBA/Law JD
Management MBA/Library and Information Science MLIS
Management MBA/Medicine MD
Management MBA/Nursing MSN
Management MBA/Public Health MPH
Management MBA/Public Policy MPP
Management MBA/Urban Planning MURP
Philosophy PhD/Law JD
Public Health MPH/Law JD
Public Health MPH/Public Policy MPP
Public Health MPH/Social Welfare MSW
Public Policy MPP/Law JD
Public Policy MPP/Medicine MD
Social Welfare MSW/Law JD
Social Welfare MSW/Public Policy MPP
Urban Planning MURP/Law JD

Articulated Degrees

Articulated degree programs permit no credit overlap; students must complete degree requirements separately for each degree.
Latin American Studies Interdepartmental MA/Education MEd in Curriculum
Latin American Studies Interdepartmental MA/Library . . . and Information Science MLIS
Latin American Studies Interdepartmental MA/Public . . . Health MPH
Medicine MD/Graduate Division health science major PhD
Oral Biology MS or PhD/Dentistry DDS or Certificate
Public Health MPH/Medicine MD
About UCLA

Few universities in the world offer the extraordinary range and diversity of academic programs that students enjoy at UCLA. Leadership in education, research, and public service make UCLA a beacon of excellence in higher education, as students, faculty members, and staff come together in a true community of scholars to advance knowledge, address societal challenges, and pursue intellectual and personal fulfillment.

As a public research university, the mission of UCLA is to create, disseminate, preserve, and apply knowledge to better society. Based on a foundation of learning and teaching, the mission also focuses on discovery, creativity, innovation, and civic engagement.

UCLA administration is led by its chancellor, provost, vice chancellors and vice provosts, and deans of the divisions and schools. Its Student Affairs division oversees programs and services that support student academic and personal success. Through the Academic Senate, faculty share in the operation and management of UCLA.

UCLA is comprised of the College of Letters and Science—with its four academic divisions: humanities, life sciences, physical sciences, and social sciences; and divisions for graduate and undergraduate education—and 12 professional schools: School of the Arts and Architecture; School of Dentistry; Graduate School of Education and Information Studies; Henry Samueli School of Engineering and Applied Science; School of Law; John E. Anderson Graduate School of Management; David Geffen School of Medicine; Herb Alpert School of Music; School of Nursing; Meyer and Renee Luskin School of Public Affairs; Jona-than and Karin Fielding School of Public Health; and School of Theater, Film, and Television.

EDUCATION

The National Research Council Committee to Assess Research-Doctorate Programs evaluates the quality of the faculty in 212 American research universities approximately every 15 years. Of the 62 doctorate degree disciplines studied in the 2011 evaluation, 33 UCLA academic departments ranked among the top 10 in the country and 12 ranked among the top 20.

Distinguished faculty members at UCLA include Nobel prizewinners, Guggenheim fellows, Sloan fellows, and Fulbright scholars, as well as numerous members of the National Academy of Sciences and the American Academy of Arts and Sciences. In fact, UCLA consistently places among the leading universities nationwide in the number of these prestigious awards granted to its faculty members.

This remarkable pool of talent is shared across the College and 12 professional schools. Undergraduate and graduate degree programs are offered by the College and by schools focused on engineering, fine arts, media, nursing, and performing arts. The other professional schools offer graduate degree programs and undergraduate minors.

Undergraduates may earn a Bachelor of Arts or Bachelor of Science degree in one of 126 different disciplines; graduate students may earn one of 100 master’s/professional and 111 doctorate/professional degrees.

Academic programs undergo continuous review and evaluation to maintain their excellence, and new degree programs are added as they are approved by the Academic Senate or the Regents.

RESEARCH

Pushing the boundaries of the known, UCLA researchers—faculty members and students, both graduate and undergraduate—venture every day into uncharted worlds from the molecular to the galactic.

Whether it’s tracing the roots of urban decay, pioneering new drug therapies for cancer, or revealing a black hole at the center of our galaxy, research at UCLA is advancing the frontiers of knowledge.

Among the 10 leading research universities in the country, in 2015-16 UCLA received $1.05 billion in extramural grants and contracts to support its research. Each year it hosts hundreds of postdoctoral scholars who share its facilities.

UCLA laboratories have seen major breakthroughs in scientific and medical research. Its study centers have helped foster understanding among the various cultures of the world. And its ongoing pursuits of new knowledge in vital areas continue to improve the quality of life for people around the world.

Faculty members teach both undergraduate and graduate courses and, through their research, create knowledge as well as transmit it. At UCLA, students are taught by the people making the discoveries. They exchange ideas with faculty members who are authorities in their fields and, even as undergraduate students, are encouraged to participate in research to experience firsthand the discovery of new knowledge.

SERVICE

As a public university, serving the community is one of the greatest commitments UCLA makes. Undergraduate and graduate programs, research activities, community outreach programs, and grass-roots participation by students, faculty, staff, and alumni help to forge a partnership between the University and the entire Los Angeles region.

With the Ronald Reagan UCLA Medical Center, UCLA furthers its tradition of medical outreach and assures the highest quality of care to Los Angeles and the world. The
School of Dentistry, with clinics on campus and in Venice, offers free dental care and treatment to those in need at community health fairs. The Rape Treatment Center—located at the UCLA Medical Center, Santa Monica—offers 24-hour care to victims. Faculty and students in the Fielding School of Public Health work in communities around the world to address disparities underlying differences in the health status of individuals, and the School of Nursing offers care to the poor and homeless through its nurse-managed Health Center at the Union Rescue Mission. The University also supports K-12 enhancement programs such as the Music Partnership Program in the Herb Alpert School of Music, which funds UCLA students to be academic and musical mentors for at-risk youth.

Students can get involved in the community in many different ways. The UCLA Volunteer Center coordinates year-round programs and annual events, such as UCLA Volunteer Day where more than 6,500 Bruins perform service work at over 40 community partner sites across Los Angeles. BruinCorps tutors under-performing youth in disadvantaged communities.

As UCLA gives to the community, Los Angeles gives something back. University arts and cultural programs, for example, attract more than half a million people each year, drawn by everything from world-class acts performing at Royce Hall to screenings of classic films from the School of Theater, Film, and Television archives. These relationships create opportunities for partnerships and growth that ensure UCLA’s preeminence in the twenty-first century and beyond.

**HISTORY OF UCLA**

In 1880—with just 11,000 inhabitants—the pueblo of Los Angeles convinced the state government to establish a normal school (teachers’ college) in Southern California. Enthusiastic citizens contributed between $2 and $500 to purchase a site; and on August 29, 1882, the Los Angeles Branch State Normal School welcomed its first students in a Victorian building that had been erected on the site of an orange grove.

By 1914 Los Angeles had grown to a city of 350,000, and the school moved to new quarters—a Hollywood ranch off a dirt road that later became Vermont Avenue. In 1919 the school became the Southern Branch of the University of California, and offered two years of instruction in letters and science. Third- and fourth-year courses were soon added; the first class of 300 students was graduated in 1925, and two years later the Southern Branch had earned its new name: University of California at Los Angeles. In 1958, at was replaced by a comma and the official name became University of California, Los Angeles.

Continued growth mandated a site that could support a larger campus, and in 1927 ground was broken in the chaparral-covered hills of Westwood. The four original buildings—Royce Hall, Powell Library, Haines Hall, and Kinsey Hall (now named Humanities Building)—formed a lonesome cluster in the middle of 400 empty acres. The campus hosted 5,500 students its first term in 1929. The UCLA master’s degree was established in 1933 and the doctorate in 1936. UCLA was fast becoming a full-fledged university that offered advanced study in almost every field.

Following World War II, UCLA began a period of spectacular growth: in 25 years its enrollment tripled to 27,000 students. The campus undertook what would become a $260 million building program that included residence halls, parking structures, laboratories, more classrooms, service buildings, athletic and recreational facilities, and a teaching hospital that is now one of the largest and most highly respected in the world. In the late 1950s and 1960s, UCLA was at the center of many milestones: the first open-heart surgery in the western U.S. was performed at its medical center; the first of 10 NCAA men’s basketball championships was won; and it became the first ARPANET node, heralding the birth of the Internet.

The rest of the twentieth century, through the opening of the twenty-first, was peppered with notable UCLA events: Nobel prizes awarded to multiple faculty; breakthroughs in treatments for cancer, brain aneurysms, and organ transplants; explosive growth in research grants; more than 30 Oscars awarded to creative alumni; completion of a new medical center; expansion of campus housing to accommodate nearly all incoming freshmen; and becoming the first university to win 100 NCAA team championships.

Today, UCLA is home to nearly 45,000 students and 4,300 faculty members. With 213 campus buildings, classes are held in more than 70 facilities. As UCLA approaches its 100th anniversary, it remains firmly rooted in Westwood but its reach is beyond borders, with programs and collaborations that span the country, the globe, and even outer space.

**UNIVERSITY OF CALIFORNIA SYSTEM**

UCLA is part of the University of California (UC) system, which traces its origins to 1868 when Governor Henry H. Haught signed the Organic Act that provided for California’s first “complete university.” Classes began the next year at the College of California in Oakland. In 1873 the first Berkeley campus’ first buildings were completed, and
the University moved into its new home. The following June, bachelor's degrees were conferred on 12 graduates.

Today, UC is one of the largest and most renowned centers of higher education in the world. Its 10 campuses span the state, from Davis in the north to San Diego in the south. In between are Berkeley, San Francisco, Merced, Santa Cruz, Santa Barbara, Los Angeles, Riverside, and Irvine. All campuses adhere to the same admission guidelines and high academic standards, yet each has its own distinct character and academic individuality. Riverside, for example, excels in the plant sciences and entomology; Davis has a large agricultural school and the only UC veterinary medicine program; San Diego offers excellent oceanography and marine biology programs; and San Francisco is devoted exclusively to the health sciences. Among the campuses are six medical schools and four law schools, as well as schools of architecture, business administration, education, engineering, and many others.

The UC campuses have a combined enrollment exceeding 270,000 students, over 78 percent of them California residents. About one-fourth study at the graduate level. Some 150 laboratories, extension centers, and research and field stations strengthen teaching and research while supplying public service to California and the nation. The collections of over 100 UC libraries on the 10 campuses are surpassed in size in North America only by the U.S. Library of Congress collection.

The UC faculty is internationally known for its distinguished academic achievements. On its 10 campuses the University has 32 living Nobel laureates, and membership in the National Academy of Sciences is the largest of any university in the country.

The UC system is governed by a Board of Regents whose regular members are appointed by the Governor of California. In addition to setting general policy and making budgetary decisions for the UC system, the Regents appoint the President of the University, the 10 chancellors, and the directors and deans who administer the affairs of the individual campuses and divisions of the University. The Regents delegate authority in academic matters to the Academic Senate, which determines academic policy for the University as a whole. The Senate, composed of faculty members and certain administrative officers, determines conditions for admission and granting of degrees, authorizes and supervises courses and curricula, and advises UC administrators on budgets and faculty appointments and promotions. Local divisions of the universitywide Academic Senate determine academic policy for each campus. Students also participate in policymaking at campus and system levels.

LIFE ON CAMPUS

Just six miles from the ocean, UCLA lies in one of the most attractive areas of Southern California. It is bordered on the north by the protected wilderness of the Santa Monica Mountains and on the south by Westwood Village. Besides lecture halls and classrooms, campus facilities include libraries, studios, theaters, and a planetarium; athletic fields, famed Pauley Pavilion, and recreation/exercise space; gardens and outdoor spaces accented by the Inverted Fountain and Janss Steps; the Hill, home to campus residence halls and common spaces; and its renowned medical center.

Unique Setting

UCLA is nestled in the hills of Westwood, with the Romanesque architecture of its early buildings a backdrop for diverse campus settings. Bruin Walk continually echoes with the chatter of students and vendors, but nearby, the botanical gardens provide a serene escape. While a hip-hop band energizes lunchtime crowds in the Ackerman quad, a classical recital may be taking place in Schoenberg Music Building, and students contemplating a Rodin or Lachaise in the Murphy Sculpture Garden may be unaware of a political rally organizing in Meyerhoff Park. With its traditional appearance and temperate climate, it is not unusual to find campus locations being used for filming television and movies and hosting large events.

To give a feel for the dynamic atmosphere at UCLA, tours for prospective undergraduates are offered by Undergraduate Admission.

Large Campus with a Comfortable Feel

The general campus population, some 44,947 students, is enriched by an additional 3,929 in the health sciences schools of Dentistry, Medicine, Nursing, and Public Health. While such numbers sound daunting, the University offers orientation sessions and innovative academic assistance programs to help acclimate new students. Through a range of services and social programs, new students quickly meet people with common interests in their academic departments, residence halls, or clubs and organizations. Even athletic events help to cement relationships as the campus comes together to celebrate Bruin victories.

Large lecture groups exist, especially in introductory courses; however, 82 percent of lower-division lecture classes in 2015-16 had under 200 students, and the University is striving to further reduce class size. Large lecture classes typically include discussion sections of about 25
students, or smaller seminars and laboratory classes. There is an overall ratio of one faculty member for approximately 17 students.

Most UCLA faculty members set aside office hours for students and appreciate the opportunity for informal conversation. Professors are often aided by graduate student teaching assistants (TAs).

**Retention and Graduation**

Retention and graduation rates in undergraduate programs at UCLA are consistently among the highest in the nation. At least 97 percent of all students entering as freshmen and 94 percent of all students entering as transfers regularly return to enroll at UCLA for the second academic year and beyond.

For entering freshmen, 76 percent graduate within four years, and 92 percent within six years. The average time to degree is 12 or fewer quarters (i.e., four or fewer years). For entering transfer students, 66 percent graduate within two years and 93 percent of all entering transfer students eventually graduate from UCLA.

More information is available at the Academic Planning and Budget campus statistics website.

**Dynamic Student Body**

Students at UCLA pride themselves on academic excellence. The fall quarter 2016 entering freshman class had an average high-school GPA of 4.33, with an average SAT Reasoning Test composite score of 1,929 out of a possible 2,400.

One of the highest University priorities is to advance the diversity of its students, faculty, staff, and administrators. The UCLA student population—nearly equally divided between men and women—yields the wide range of opinion and perspective essential to a great university.

Although most students are from California, they come from all 50 states and 116 foreign countries to study at UCLA. Ethnic minorities comprise 73 percent of the undergraduates and 65.3 percent of the graduate student population, and international students and scholars presently number over 12,000, making this one of the most popular American universities for students from abroad.

**ACADEMIC PROGRAMS**

UCLA has a tradition of advancing higher education and the common good through excellence in scholarship, research, and public service. Academic excellence, faculty distinction, and a comprehensive curriculum are hallmarks of the UCLA experience. The College of Letters and Science and 12 graduate and professional schools present an extraordinary richness and diversity of teaching programs.

Academic programs offered at UCLA span the breadth and depth of over 200 disciplines and areas of study. Lecture, discussion, laboratory, research, and creative courses are supplemented by seminars, honors programs, specialized freshman clusters, internships, and education abroad opportunities. Instruction takes place in many unique venues, including specialized classrooms, computer and scientific laboratories, performance and studio spaces, and off-campus settings. Students and faculty members themselves mirror the cultural and racial diversity of Los Angeles. Academic programs are described in detail in the Curricula and Courses chapter of this catalog.

The International Education Office, Summer Sessions, UCLA Extension, and UCLA International Institute provide academic and professional resources to UCLA and the greater Los Angeles community, as well as to the international community.

**Study Abroad**

Study abroad and student exchange are exciting and broadening experiences that enrich any educational curriculum. The International Education Office (IEO) works to facilitate international education by serving as the campuswide portal for the development and administration of study abroad and student exchange activity. It supplies assistance to academic units seeking to develop study abroad programs, and it collaborates with the Academic Senate and departments to ensure academic oversight of study abroad programs. The IEO also coordinates student advising services for undergraduate and graduate students interested in studying abroad.

The IEO administers several programs, including the UC Education Abroad Program (UCEAP), Summer Travel Study, Non-UC Programs, and various student exchange agreements.

**Education Abroad Program**

The UC Education Abroad Program (UCEAP) offers short- and long-term study programs in cooperation with over 115 host universities and colleges in more than 42 countries throughout the world. Participating students remain registered at their home campuses while studying abroad and receive full academic credit for their work. With careful planning, study abroad should not delay progress toward graduation. While on EAP, students are eligible for financial aid.
Summer Travel Study

Summer Travel Study offers short-term summer programs on five different continents. Summer Travel Study programs offer UC credit, the promise of an exciting summer-time adventure, and intensive learning experiences taught by distinguished UCLA faculty members. Over 20 academic departments offer Summer Travel Study programs that include from 8 to 16 quarter units of UC credit. Financial aid is available for qualified UC students. Registration begins in November for the following summer on a first-come, first-served basis. Summer Travel Study is open to all students at any academic level. There is no grade-point average requirement to participate.

Non-UC Programs

Students may also study abroad through other universities and programs not affiliated with UCLA. The IEO strongly recommends that all students considering non-UC programs contact the IEO early in the planning process about UCLA policies on planned academic leave (PAL), transfer credit, financial support, and more. UC financial aid is not available for study abroad on non-UC programs.

Summer Sessions

Throughout the summer, UCLA provides three ways to earn UCLA credit—academic courses, summer institutes, and travel study. More than 1,000 courses from over 70 departments are offered in six-, eight-, nine-, and 10-week sessions. Summer institutes offer an innovative approach to teaching and learning that combines UCLA coursework with practical training in real-world situations, preparing students for their future careers. Some programs are offered in an intensive format, specifically for advanced high school students, affording them an opportunity to experience the academic rigors of UCLA. Travel study programs offer the option to study various subjects as part of an exciting and challenging travel experience. Many students take advantage of summer sessions to put themselves closer to graduation, explore possibilities, and broaden perspectives.

Although visiting students are welcome to enroll, admission to summer sessions does not constitute admission to the University in either undergraduate or graduate standing. Students who wish to attend UCLA in regular academic terms must follow admission procedures described in the Undergraduate Study and Graduate Study chapters of this catalog.

Regularly enrolled UCLA undergraduate students may attend summer sessions for full unit and grade credit. Summer sessions work is recorded on the UCLA transcript, and grades earned are computed in the grade-point average. Check with a College or school counselor about applying these courses toward degree requirements and about any limitations the College or school may impose on summer sessions study. UCLA financial aid is available to qualified UCLA students.

Regularly enrolled UCLA graduate students may, with department approval, take courses offered in summer sessions for credit toward a master's or doctorate degree; consult a graduate adviser in advance about this possibility.

Summer sessions courses may also satisfy the academic residence requirement for master's or doctorate degrees. Unlike enrollment in regular terms, students may attend another college institution for credit while they are enrolled in summer sessions. Registration information is available from the Summer Sessions office.

UCLA Extension

With over 90,000 adult student enrollments each year, UCLA Extension is one of the largest university continuing education programs in the world. It is designed to bring the benefits of the University—its scholars, research, and resources—to the community and the state as a whole.

Many of the 5,300 UCLA Extension classes are innovative and experimental in content, format, and teaching methods. Credit and noncredit courses are offered in nearly every academic discipline, in many interdisciplinary areas, and in emerging fields.

In addition, Extension offers special programs each term on topical issues as well as those of ongoing public concern. Many noncredit Extension courses offer the opportunity to earn Continuing Education Units (CEUs), widely used for relicensure and other professional/career-related purposes.

Although registering for Extension courses does not constitute admission to UCLA, degree credit earned through Extension may apply toward the UCLA bachelor's or master's degree; consult a College or school counselor or graduate adviser before enrolling. For more information, refer to UCLA Extension under Transfer Credit in the Academic Policies chapter of this catalog.

UCLA International Institute

The UCLA International Institute promotes interdisciplinary education and research on global and area studies. The institute offers six undergraduate majors including global studies and international development studies, as well as ten undergraduate minors and three graduate programs. Its academic programs enroll nearly 1,000 students and graduate 400 to 450 each year. The institute's more than 25 centers and programs foster innovative multidisciplinary research and educational opportunities in virtually every region of the world. Together with its centers, the institute serves the entire campus through a wide range of academic events, scholarships, and grants. And it brings together globally and regionally focused UCLA faculty, departments, professional schools, and research centers in collaborative initiatives to address pressing world challenges such as climate change, global health issues, migration patterns, and the role of nonstate actors.

The U.S. Department of Education has designated institute programs in East Asia, Latin America, and Southeast Asia as National Resource Centers. Its specialized center for heritage language teaching is the nation's first National Heritage Language Research Center. The institute also houses topical centers, including the Burke Center for International Relations and the Center for the Study of International Migration. Other programs include the Fulbright Enrichment Program; and the International Visi-
tors Bureau, which hosts almost 700 international educational and professional visitors each year.

A gateway to the world for UCLA and the global city of Los Angeles, the International Institute and its centers organize a robust schedule of free public events, along with research conferences, cultural programs, and K-12 outreach. The Vice Provost for International Studies and Global Engagement oversees the institute; promotes international education, the UCLA global branch, and partnerships worldwide; and manages more than 350 formal University research, teaching, and student exchange agreements.

RESEARCH PROGRAMS

At any given time, more than 6,000 funded research programs are in progress at UCLA. Interdisciplinary Organized Research Units, research centers, institutes, and laboratories focus on key research in a specific area.

Organized Research Units

Organized Research Units (ORUs) are campuswide research programs. Members come from more than one department and usually from more than one school, college, or division.

American Indian Studies Center

The American Indian Studies Center (AISC) serves as an educational and research catalyst. It includes a library, postdoctoral fellowship programs, a publishing unit that produces books and a quarterly journal, and a student/community relations unit. AISC is one of four ORUs overseen by the Institute of American Cultures (IAC).

Asian American Studies Center

The Asian American Studies Center (AASC) seeks to increase knowledge and understanding of the experiences of Asian and Pacific Islander peoples in America, and promotes the development of material resources related to Asian American studies. The center includes a library, publications unit, student/community projects unit, and postdoctoral fellowship programs. AASC is one of four ORUs overseen by the Institute of American Cultures (IAC).

Brain Research Institute

The Brain Research Institute (BRI) has one of the largest programs for neuroscience research and education in the country, with approximately 300 scientists from nearly 30 departments involved in every aspect of neuroscience research from molecular organization to human behavior. The BRI offers facilities with new technologies for research and training; and sponsors affinity groups, conferences, and symposia to strengthen ties among neuroscientists. Public service activities include an elementary-and-secondary-school outreach program and a joint educational program with UCLA Extension.

Center for European and Russian Studies

The Center for European and Russian Studies (CERS) develops and coordinates teaching and research on Russia and the successor states of the former Soviet Union—and western European countries—through conferences, lectures, seminars, and academic exchange programs with European and Russian institutions. It also funds advanced instruction in languages such as Czech, Hungarian, Romanian, Polish, and Serbian/Croatian, and offers fellowships to graduate students in European area studies.

Center for Medieval and Renaissance Studies

The Center for Medieval and Renaissance Studies (CMRS) supports the research activities of some 125 faculty members in 24 academic disciplines dealing with the development of civilization between A.D. 300 and 1650. Programs include appointing visiting professors, organizing conferences, and supporting departments in inviting lecturers. The center sponsors two journals: Viator, with emphasis on intercultural and interdisciplinary studies; and Comitatus, with articles by graduate students and recent PhD graduates.

Center for Seventeenth- and Eighteenth-Century Studies

The Center for Seventeenth- and Eighteenth-Century Studies organizes scholarly programs and workshops, publishes conference results, provides long- and short-term fellowships to students and scholars, offers graduate research assistantships and master classes, and organizes public programs and classical music concerts. The center administers the William Andrews Clark Memorial Library, located in the West Adams neighborhood of Los Angeles, that specializes in seventeenth- and eighteenth-century British works. The library also has a renowned collection centering on Oscar Wilde and his era, and significant holdings of modern fine printing and Western Americana.

Center for the Study of Women

The Center for the Study of Women (CSW) draws on the expertise of more than 200 faculty members from 10 professional schools and 34 departments. To facilitate faculty research, the center organizes conferences and lecture series on feminist theory, administers research grants, and offers an affiliation for research and visiting scholars. The center sponsors working groups; produces calendar-of-events posters; and hosts graduate programs and an annual graduate student research conference.

Chicano Studies Research Center

The Chicano Studies Research Center (CSRC) promotes the study and dissemination of knowledge about the experience of people of Mexican descent and other Latinos in the U.S. The center supports interdisciplinary and collaborative research and the analysis, understanding, and articulation of issues critical to the development of Chicano and Latino communities in the U.S. It seeks to establish and maintain relationships with communities with similar academic and research interests at the state,
national, and international levels. The center also includes a library, academic press, and grant fellowship programs. CSRC is one of four ORUs overseen by the Institute of American Cultures (IAC).

Cotsen Institute of Archaeology
The Cotsen Institute of Archaeology (CIoA) studies and seeks to understand the human past through artifacts, analysis of field data, and the creation of archives. The institute—the only one of its kind in the U.S.—coordinates facilities for more than 30 researchers, and many graduate students and volunteers, in 11 associated academic departments. Facilities include the Ceramics Research Group collections, Cotsen Digital Archive, Lithic Analysis Research Group collections, Moche Archive, Rock Art Archive, and many laboratories such as the Channel Islands Laboratory, East Asian Laboratory, Human Origins Laboratory, and Zooarchaeology Laboratory. It publishes the findings of scholars from UCLA and other archaeology centers and supplies a forum for the public presentation of archaeological discoveries and advances.

Crump Institute for Molecular Imaging
The Crump Institute for Molecular Imaging (CIMI) brings together physical, biomathematical, chemical, biological, and clinical scientists and students to merge the principles of imaging with those of molecular and cellular biology, genetics, and biochemistry. The imaging domains range from the molecular organization of viruses and cellular subunits to the biological processes of organ systems in the living human. A major focus is the development and use of imaging technologies to collect, analyze, and communicate biological data. The institute has research and educational programs for visiting scientists, postdoctoral scholars, and PhD graduate students that include the development of multimedia computer-based learning technologies.

Gustave E. von Grunebaum Center for Near Eastern Studies
The von Grunebaum Center for Near Eastern Studies (CNES) coordinates research and academic programs related to the Near East. It supports the degree program in African and Middle Eastern Studies. Center resources include the largest faculty, one of the most comprehensive library holdings, and the richest variety of Near and Middle Eastern studies courses of any institution in the Western Hemisphere. The center conducts publication, community outreach, and scholarly exchange programs.

Institute for Research on Labor and Employment
The interdisciplinary research program of the Institute for Research on Labor and Employment (IRLE) studies employment relationships including labor markets, labor law, labor and management relations, equal employment opportunity, occupational safety and health, and related issues. Its UCLA Labor Center offers social policy and employment relations programs to the public, unions, and management. The academic unit of the institute oversees the Labor and Workplace Studies minor.

Institute of Geophysics and Planetary Physics
The Institute of Geophysics and Planetary Physics (IGPP) is a multicampus research unit of the University of California; the branch at UCLA researches climate dynamics, geophysics, geochemistry, space physics, biochemistry, and biology. Research topics include the nature of the Earth, moon, and other planetary bodies; global and regional environmental change; the origin of terrestrial life; dynamical properties of the sun and solar wind; and the nonlinear dynamics of complex systems. Facilities include analytical laboratories in geochemistry, meteoritics, glaciology, petrology, geochronology, archaeology, and the origins of life; laboratories for experiments in fluid dynamics and high-pressure physics; developmental laboratories for instrumentation in space physics and seismology; and computational laboratories for large-scale numerical modeling.

Intellectual and Developmental Disabilities Research Center
The Intellectual and Developmental Disabilities Research Center (IDDRC) supplies laboratories and clinical facilities for research and training in intellectual and developmental disabilities. Interdisciplinary activities range from anthropological studies to molecular aspects of inherited metabolic diseases.

James S. Coleman African Studies Center
The Coleman African Studies Center (ASC) coordinates research on and teaching about Africa in the humanities, social sciences, and natural sciences, as well as in the schools of Arts and Architecture; Education and Information Studies; Law; Medicine; Public Affairs; Public Health; and Theater, Film, and Television. The center sponsors public lectures, seminars, publications, and academic exchanges with African institutions, and an outreach service to the Southern California community.
Jules Stein Eye Institute

The Stein Eye Institute (JSEI) is one of the best-equipped centers for research and treatment of eye diseases in the world. This comprehensive facility is dedicated to the preservation of vision and prevention of blindness, the care of patients with eye disease, and education in the broad field of ophthalmology. Out-patient, inpatient, and surgical treatments are available.

The Doris Stein Eye Research Center houses clinical facilities as well as new research and training programs concentrating on major eye diseases worldwide.

The Edie and Lew Wasserman Eye Research Center houses outpatient surgery clinics; faculty offices; and refractive, oculoplastic, and cataract services.

Latin American Institute

The Latin American Institute (LAI) is a major regional, national, and international resource on Latin America and hemispheric issues. The institute sponsors and coordinates research, academic and public programs, and publications on Latin America in the humanities, social sciences, and professional schools; and links its programs and activities with developments in the field and in other institutional settings. By combining instruction, research, and service—and by encouraging multidisciplinary and interdisciplinary approaches—the institute promotes the use of UCLA Latin American resources for the benefit of the campus, the broader community, and the public at large.

Molecular Biology Institute

The Molecular Biology Institute (MBI) promotes molecular biology research and teaching at UCLA, with emphasis on genomics, proteomics, and chemical biology. The institute houses the laboratories of 200 faculty members from 30 UCLA departments and the Institute for Genomics and Proteomics, as well as the administration of the Molecular Biology Interdepartmental PhD Program and the Graduate Programs in Bioscience consortium.

Plasma Science and Technology Institute

The Plasma Science and Technology Institute (PSTI) is dedicated to research of plasma physics, fusion energy, and the application of plasmas in other disciplines. Students, professional research staff, and faculty members study basic laboratory plasmas, plasma-fusion confinement experiments, fusion engineering and nuclear technology, computer simulations and the theory of plasmas, space plasma physics and experimental simulation of space plasma phenomena, advanced plasma diagnostic development, and laser-plasma interactions. They also study the use of plasma in applications ranging from particle accelerators to the processing of materials and surfaces used in microelectronics or coatings.

Ralph J. Bunche Center for African American Studies

The Bunche Center for African American Studies (CAAS) conducts and sponsors research on the African American experience, supports the African American studies curriculum, publishes research results, and sponsors community service programming. CAAS is one of four ORUs overseen by the Institute of American Cultures (IAC).

UCLA-DOE Institute for Genomics and Proteomics

The UCLA-DOE Institute for Genomics and Proteomics, funded through a Department of Energy (DOE) contract, conducts research in bioenergy, carbon capture, microbial genomics, and structural and functional studies of organisms and their constituents. Institute faculty members have joint appointments in academic departments and teach at both undergraduate and graduate levels. Major facilities include a biomedical cyclotron; advanced scanning equipment; and macromolecular crystallization, nuclear magnetic resonance, protein expression, and X-ray crystallography facilities.

Specialized Research Centers, Laboratories, and Institutes

Additional research centers, institutes, and laboratories advance scholarship in all fields. The breadth of research conducted on campus is reflected in diverse undertakings from behavior to computing, demography to disease, and language to politics. This sampling of current research entities offers a view into the scope of research units.

Social Sciences

California Center for Population Research
Center for Policy Research on Aging
Center for Study of Urban Poverty
National Center for Research on Evaluation, Standards, and Student Testing
UCLA Anderson Forecast

Health Sciences

Center for the Study of Parkinson’s Disease
Fernald Child Study Center
Jonsson Comprehensive Cancer Center
Mary S. Easton Center for Alzheimer’s Disease Research
UCLA AIDS Institute

Engineering and Physical Sciences

Center for Embedded Networked Sensing
Center for Energy Science and Technology Advanced Research
Collective on Vision and Image Sciences
Institute for Pure and Applied Mathematics
UCLA Logic Center
ART GALLERIES AND MUSEUMS

Museums, galleries, and gardens offer eclectic resources ranging from the ancient to the avant-garde, helping to make UCLA the leading arts and cultural center in the West.

Fowler Museum at UCLA

The Fowler Museum is internationally known for the quality of its collections. They encompass the arts and material culture of much of the world, with particular emphasis on West and Central Africa; Asia and the Pacific; and the Americas, past and present. It supports UCLA instruction and research and sponsors major exhibitions, lecture programs, and symposia. The museum is open to the public Wednesday through Sunday.

Grunwald Center for the Graphic Arts

Housed in the UCLA Hammer Museum, the Grunwald Center for the Graphic Arts holds a distinguished collection of over 45,000 prints, drawings, photographs, and artists’ books, including nearly 10,000 works from the prestigious Armand Hammer Daumier and Contemporaries Collection. A study and research facility for the benefit of students and the community, the center’s permanent holdings include significant European and American examples from the fifteenth century to the present. It is particularly noted for its collection of German Expressionist prints and works on paper by Matisse and Picasso, as well as the Richard Vogler Cruikshank Collection and the Frank Lloyd Wright Collection of Japanese prints. The center is open only by appointment.

Franklin D. Murphy Sculpture Garden

Situated on a picturesque five-acre expanse that spans the heart of north campus, the Murphy Sculpture Garden contains a collection of over 70 major works by Arp, Butterfield, Calder, Falkenstein, Hepworth, Lachaise, Lipchitz, Matisse, Moore, Noguchi, Rodin, Smith, Zuniaga, and many other late nineteenth- and early twentieth-century masters. All works in this distinguished collection are private gifts to the University. Tours may be arranged.

New Wight Gallery

The New Wight Gallery is an exhibit space for visual arts, including student and faculty exhibitions, housed in 1100 Broad Art Center.

UCLA Hammer Museum

The Hammer Museum regularly presents its collection of Impressionist and Post-Impressionist paintings by such artists as Monet, Pissarro, Sargent, Cassatt, and Van Gogh. The museum organizes and presents major changing exhibitions devoted to examinations of historical and contemporary art in all periods. Cultural programming—including children’s performance and storytelling series, music, poetry readings, and lunchtime art talks—are presented throughout the week.

UCLA Meteorite Collection and Gallery

UCLA has the largest collection of meteorites on the West Coast and the fifth largest in the U.S. Many of the most important meteorites are displayed in the UCLA Meteorite Gallery located in 3697 Geology. The collection and gallery are a major resource for cosmochemical research and the teaching of planetary science.

LIBRARIES

The UCLA Library, a campuswide network of libraries serving programs of study and research in many fields, is among the top 10 academic research libraries in North America. The total collections number more than 12 million volumes, and over 100,000 current serial titles.

Reference librarians are available in all library units to answer questions about using online systems and to provide assistance with reference and research topics.

Students locate and identify materials through web-based library information systems. The UCLA Library catalog contains records for all its holdings and other campus collections, including the Archive Research and Study Center of the Film and Television Archive, Chicano Studies Research Center Library, Ethnomusicology Archive, Social Science Data Archive, Instructional Media Collections and Services, and William Andrews Clark Memorial Library. It also includes library item location and circulation status.

Other available catalogs include the UC Libraries Catalog (Melvyl), WorldCat, Center for Research Libraries, Online Archive of California, numerous abstracting and indexing databases, and gateways to other systems. The Melvyl Catalog contains information on library holdings at all 10 UC campuses.

While continuing to develop and manage collections of traditional printed materials, the UCLA Library also makes a number of digital resources available for campus use through the library site. These include electronic reserves and electronic journals, texts, reference resources, periodical indexes, and abstracts.
Arts Library
Housed in 1400 Public Affairs Building, the Arts Library has more than 300,000 books on architecture, architectural history, art, art history, design, fashion and costume, film, television, photography as fine art, studio art, theater, urban design, and allied disciplines. It also contains the Elmer Belt Library of Vinciana, a special collection of rare books and incunabula about Leonardo da Vinci and related materials in Renaissance studies. Performing Arts Special Collections, housed in the Young Research Library, contain noncirculating materials including the Artists’ File; archival records of major Southern California motion picture studios and television production companies; scripts from film, television, and radio; animation art; personal papers of writers, directors, and producers; photographs and production stills; and posters, lobby cards, press kits, and West Coast theater playbills.

Charles E. Young Research Library
The Young Research Library (YRL) primarily serves graduate research in the humanities, social sciences, education, public affairs, government information, and maps. Most of its collections are arranged in open stacks. The building also houses reference, circulation, graduate reserve, and periodicals services and the Microform and Media Service, with microcopies of newspapers, periodicals, and other materials. UCLA Library Special Collections contains rare books and pamphlets, primarily in the humanities, social sciences, and visual arts, from the fifteenth to twentieth century; University Archives; early maps and atlases; early California newspapers; manuscript collections; transcripts of oral history; ephemera; microfilm; tape recordings; prints; paintings; and drawings, including original architectural drawings.

Eugene and Maxine Rosenfeld Management Library
Located in the Anderson Graduate School of Management complex, the Rosenfeld Management Library houses materials on accounting information systems, arts management, business history, corporate history, entrepreneurship, finance, general management and management theory, industrial relations, international and comparative management, management information systems, management strategy and policy, marketing, operations, research, production and operations management, public/not-for-profit management, and real estate.

Hugh and Hazel Darling Law Library
The Darling Law Library collects published case decisions, statutes, and codes of the federal and state governments of the U.S. and other common law jurisdictions, legal treatises and periodicals in Anglo-American and international law, and appropriate international and comparative law holdings. The Law Library reports to the dean of the School of Law and contains over 600,000 print volumes and over 30,000 electronic titles.

Louise M. Darling Biomedical Library
The Darling Biomedical Library, located in the Center for Health Sciences, serves all the UCLA health and sciences departments and schools and the Ronald Reagan UCLA Medical Center. Its collections focus on materials related to medicine, nursing, dentistry, public health, physiological sciences, biology, molecular biology, chemistry, biochemistry, zoology, plant sciences, psychology, and life sciences, as well as rare works in the history of health and life sciences, botanical illustration, and Arabic and Persian medical manuscripts. It contains over 683,778 print volumes and thousands of journal subscriptions.

Music Library
The collections of the Music Library in the Schoenberg Music Building include books, music scores, sheet music, video and sound recordings, microforms, and interactive media on Western music history and criticism; world music styles, cultures, and traditions; and music theory, aesthetics, philosophy, and organology. Performing Arts Special Collections, housed in the Young Research Library, include rare printed and manuscript books, scores, and opera librettos; personal papers of prominent Southern California composers, performers, and writers on music; and archives of film, television, and radio music.

Powell Library
Powell Library features collections and services in support of the undergraduate curriculum in the College of Letters and Science (humanities and social, life, and physical sciences). Course reserve materials—including books, articles, audiotapes, homework solutions, lecture notes, and Academic Publishing Service Readers—are available for loan. The Campus Library Instructional Computing Commons (CLICC), located on the first floor of Powell Library, gives students access to computers and multimedia equipment; and Night Powell offers study space in a late-night reading room. There are Inquiry Laboratories with research assistance and Undergraduate Writing Center services.
Richard C. Rudolph East Asian Library
Located in the Young Research Library, the Rudolph East Asian Library collects Chinese, Japanese, and Korean language materials in the humanities and social sciences. The collection is particularly strong in Japanese Buddhism, religion, Chinese and Japanese fine arts, Chinese archaeology, premodern history and classical literature on both China and Japan, and Korean literature and religion.

Science and Engineering Library
The Science and Engineering Library (SEL) collections on engineering, mathematics, and the physical sciences are housed in two separate locations. SEL/Boelter in Boelter Hall houses materials on aeronautics, astronomy, and atmospheric sciences; bioengineering; chemical, civil, electrical, environmental, manufacturing, mechanical, and nuclear engineering; computer science and electronics; energy technology; mathematics; metals and materials; pollution; and statistics. SEL/Geology in the Geology Building houses materials on geology, geophysics, geochemistry, space physics, planetary science, regional geology, paleobiology, micropaleontology, invertebrate paleontology, ore deposits, geomorphology, hydrology, chemical oceanography, and all U.S. Geological Survey publications of western U.S. state geological surveys.

SPECIAL ARCHIVES AND COLLECTIONS
In addition to the extensive collections of the UCLA Library, a rich array of other information resources is independently managed by individual UCLA departments and centers.

Cultural Center Collections
The Bunche Center for African American Studies Library and Media Center contains materials reflecting the African American experience in the social sciences, arts, and humanities. The American Indian Studies Center Library houses a collection on American Indian life, culture, and state of affairs in historical and contemporary perspectives. The Asian American Studies Center Library/Reading Room features Asian American and Pacific Islander resources. Materials related to Chicano and Latino cultures are housed in the Chicano Studies Research Center Library. The William Andrews Clark Memorial Library contains rare books, manuscripts, and other noncirculating materials on English culture (1641 to 1800). The English Reading Room features a noncirculating collection of British and American literature, literary history, and criticism.

Instructional Media
Instructional Media Collections and Services, located in Powell Library, is the central UCLA resource for collection and maintenance of educational and instructional media. Materials from the collection are loaned to regularly scheduled UCLA classes and may be rented by organizations and individuals from the campus community and beyond. Staff members monitor compliance with University guidelines and federal copyright law governing the use of video recordings. Reference books from educational and feature-film distributors are available. Staff members assist in researching media on any subject and obtaining materials from outside sources. The Instructional Media Laboratory offers access to course- or textbook-related audio, interactive, and video programs. Students, assigned by faculty members to study specific supplementary materials, may learn at their own pace and time.

UCLA Film and Television Archive
The UCLA Film and Television Archive is the world's largest university-based collection of motion pictures and broadcast programming. The archive holdings of over 300,000 original film and television materials serve both the UCLA community and national and international constituencies.

The Motion Picture Collection is the country's largest collection after the Library of Congress. Among its outstanding collections are 27 million feet of Hearst Metrotone News film dating back to 1919. Other noteworthy holdings include studio print libraries from Twentieth-Century Fox, Paramount Pictures, Warner Brothers, Sony/ Columbia Pictures, Republic Pictures, RKO, New World Pictures, and Orion Pictures. Special collections document the careers of William Wyler, Hal Ashby, Tony Curtis, Rosalind Russell, Stanley Kramer, Cecil B. DeMille, Harold Lloyd, Charlton Heston, Rock Hudson, and other persons of prominence in the American film industry.

The Television Collection is the nation's largest university-based collection of television broadcast materials. Its titles include kinescopes, telefilms, and videotapes spanning television history from 1946 to the present, with
emphasis on drama, comedy, and variety programming. A special collection of over 100,000 news and public affairs programs is also maintained.

The archive exhibition program presents evening screenings and discussions that focus on archival materials, new work by independent filmmakers, and international films. The Archive Research and Study Center (ARSC) in Powell Library offers on-site viewing of the Film and Television Archive collections and research consultation to students, faculty, and researchers.

Other Collections
The Ethnomusicology Archive houses over 100,000 sound and audiovisual recordings of folk, ethnic, and non-Western classical music. The Social Science Data Archive contains a collection of statistical databases for the social sciences. The UCLA Lab School Gonda Family Library features contemporary materials for children from kindergarten through junior high school and adult works on children’s literature.

PARKS, RESERVES, AND NATURAL SCIENCE RESOURCES
The geography of Southern California is conducive to research in the natural sciences. This diverse region is a natural laboratory supported by numerous UCLA resources for study.

Biological Collections
The Biological Collections of the Ecology and Evolutionary Biology Department include marine fishes from the Eastern Pacific and Gulf of California; and birds and mammals primarily from the Western U.S., Canada, Mexico, and Central America. The department also maintains a more limited collection of amphibians, reptiles, and fossil vertebrates.

Division of Laboratory Animal Medicine
The Division of Laboratory Animal Medicine is responsible for the procurement, husbandry, and general welfare of animals required for teaching and investigative services. It also administers the campus veterinary medical and husbandry programs.

Mildred E. Mathias Botanical Garden
The Mathias Botanical Garden is a living museum with one of the most important botanical collections in the U.S. With specimens from all over the world, the seven-acre expanse on south campus specializes in tropical and subtropical plants, including some 5,000 species in 225 families. The botanical garden also has a research herbarium containing 180,000 dried plant specimens. School and community group tours are available, as are individual guided tours.

Stunt Ranch Santa Monica Mountains Reserve
The University of California founded the UC Natural Reserve System (NRS) in 1965 to preserve undisturbed natural areas representing the state’s vast ecological diversity for students, teachers, and researchers from public and private educational institutions to use as outdoor classrooms and living laboratories. The Stunt Ranch Santa Monica Mountains Reserve, administered by the Los Angeles campus, officially joined the UC NRS in November 1995. The 310-acre site is a 40-minute drive from UCLA and includes fine examples of chaparral and oak woodland ecosystems. The reserve lends itself to programs that focus on the natural ecosystems and issues of resource management in the urban/wildland interface. Undergraduate and graduate courses in the departments of Anthropology; Earth, Planetary, and Space Sciences; Ecology and Evolutionary Biology; Geography; Physics and Astronomy; and the Institute of the Environment and Sustainability utilize Stunt Ranch and other NRS sites.

UCLA HEALTH SYSTEM
Consisting of Ronald Reagan UCLA Medical Center; UCLA Medical Center, Santa Monica; Resnick Neuropsychiatric Hospital at UCLA; UCLA Mattel Children’s Hospital; and the UCLA Medical Group, with wide-reaching primary- and specialty-care offices, UCLA Health is among the most comprehensive and advanced healthcare systems in the world, and is consistently ranked among the top hospitals in the nation and best in the West. From its level-one trauma center and intensive-care units to The BirthPlace Westwood, the Ronald Reagan UCLA Medical Center on campus is equipped with the latest medical advances to provide world-class patient care. The UCLA Medical Center, Santa Monica is home to the UCLA Rape Treatment Center, which serves as a national model for the treatment of rape victims and their families.
STUDENT SERVICES

Like a small city, UCLA has its own police department and fire marshal, an equivalent to the phone company, health center, corner restaurants, and shops. Hundreds of services for the campus community facilitate academic and personal endeavors.

Study Services

From academic advising to advanced computer support, UCLA study services give students the tools they need to achieve academic success.

Academic Counseling

Many sources of academic counseling are available. Faculty advisers and counselors in the College and each school help students with major selection, program planning, academic difficulties, degree requirements, and petitions.

Advisers in each department counsel undergraduates concerning majors offered and their requirements, and possible career and graduate school options (see the College and Schools and Curricula and Courses chapters of this catalog). In addition, graduate advisers are available in each department to assist prospective and currently enrolled graduate students.

Bruin OnLine

Bruin OnLine (BOL) is the campus Internet service provider for UCLA students, faculty, and staff and a vehicle for accessing campus network communication services. Bruin OnLine services include access to the campus backbone network and the Internet, e-mail accounts, Google Apps for UCLA, Box, and personal web hosting. Limited wireless Internet access is available on campus to anyone with a wireless enabled laptop or mobile device. Utility software can be downloaded from the BOL website. Help desk services are available.

Computer Laboratories

Student computer laboratories are supported through the Campus Library Instructional Computing Commons (CLICC), a collaborative effort of the Center for Digital Humanities, Social Sciences Computing, Office of Instructional Development, and Powell Library. Some 15 computer laboratories are available throughout the campus, each with computers, peripherals, software, and services that cater to specific areas of study. See the departments listed above or Information Technology Services IT resources page for more information.

Course Readers

ASUCLA Course Reader Solutions supplies custom course readers for faculty in both print and ebook formats, obtaining 5,000 copyright authorizations each year. The office is located in the Textbooks department on the A level of Ackerman Union.

Course Websites

The Instructional Enhancement Initiative (IEI) assures that all UCLA undergraduate nontutorial courses offer an individual course website for faculty members, teaching assistants, and enrolled students. The sites facilitate the distribution of supplementary course materials, lecture notes, homework assignments, research links, and electronic communication, including virtual office hours and class bulletin boards for interactive question-and-answer sessions. Instructors decide which of these online capabilities are best suited to their course websites. Many course websites are available through the Common Collaboration and Learning Environment (CCLE).

Disabilities and Computing Program

The Disabilities and Computing Program (DCP) supplies adaptive technology and information-access support and services to students, faculty, and staff with disabilities. Applications include voice input, Braille, large print, screen-reading software, and learning disability software. Consulting and training for individuals and departments are available. The program also offers Web accessibility evaluations and guidelines.

MyUCLA

MyUCLA is the easiest way for students to gain real-time access to their academic, financial, and personal records. The site is designed with an intuitive visual interface to walk students through procedural steps. MyUCLA offers a large number of services.

Students use the Class Planner to create plans prior to enrollment and are able to share these plans with counselors. MyUCLA also allows students to check enrollment appointments; view real-time enrollment counts; find classes and enroll; exchange or drop classes; change units and grade type; and view their study list, which includes information on class meeting times, final examinations, classmates, gradebook, textbooks, and class websites.

MyUCLA is used to declare candidacy and nonattendance, view Degree Audits, order transcripts and diplomas, change address information, view term grades and calculate grade-point average, find information on holds, order commencement tickets, access BruinBill and tax information, view financial aid awards and notices, and access UCLA Google e-mail accounts. The MyUCLA Message Center contains a database of answers and allows students to correspond with campus departments.

Other features include notifications; voting in student association elections; personal calendar and event reservations; and links to UCLA online resources.

Students access the site using their UCLA Logon ID and password. MyUCLA operates Sunday from noon through Tuesday at 1 a.m. and Tuesday through Saturday from 6 a.m. to 1 a.m., including holidays. MyUCLA Features contains a full list of features.
Health and Safety Services

Arthur Ashe Student Health and Wellness Center

The Ashe Student Health and Wellness Center in Westwood Plaza is a full-service medical clinic available to all registered UCLA students. Most services are subsidized by registration fees, and a current BruinCard is required for service. Its clinical staff of physicians, nurse practitioners, and nurses is board certified. It offers primary care, specialty clinics, and physical therapy. The center has its own laboratory and radiology sections. It operates the Bruin Health Pharmacy and U See LA Optometry in nearby Ackerman Union. Visits, core laboratory tests, X-rays, and preventive immunizations are all prepaid for students with the University of California Student Health Insurance Plan (UCSHIP).

The cost of services received outside the Ashe Center, such as emergency room services, is each student's financial responsibility. Students are required to purchase medical insurance either through the UCLA-sponsored UCSHIP or other plans that provide adequate coverage. Adequate medical insurance is a condition of registration. See Registration in the Undergraduate Study and Graduate Study chapters of this catalog.

Consult the Ashe Center for specific information on its primary care, women's health, immunization, health clearance, optometry, travel medicine, and mind-body clinics, as well as dental care available to students at discounted rates. For emergency care when the Ashe Center is closed, students may obtain treatment at the Ronald Reagan UCLA Medical Center emergency room on a fee-for-service basis.

Mental Health Services

Services for mental health range from routine counseling and psychotherapy to crisis counseling.

Counseling and Psychological Services

Counseling and Psychological Services (CAPS) offers short-term personal counseling and psychotherapy in 221 Wooden Center West, 310-825-0768.

Psychologists, clinical social workers, and psychiatrists assist with situational stresses and emotional problems from the most mild to severe. These may include problems with interpersonal relationships, academic stress, loneliness, difficult decisions, sexual issues, anxiety, depression, or other concerns affecting the personal growth of students.

In addition, Campus Assault Resources and Education (CARE) counselors—individuals who provide information, support, and resources for members of the UCLA community who have been raped, sexually assaulted, stalked, or involved in a dating or domestic violence incident—can discuss options and alternatives, help identify and assist in contacting the most appropriate support services, and answer any questions that may arise.

Service is confidential and available to regularly enrolled students. Students are seen individually by appointment or may choose from a number of groups offered each term. Emergency and walk-in counseling is also available.

Student Safety and Security

For police, fire, or medical emergencies, call 911 from any campus phone. For nonemergency information, call UCLA Police at 310-825-1491.

The police department offers free Evening Escorts every day of the year from dusk to 1 a.m. Uniformed community service officers (CSOs)—specially trained UCLA students—walk students, staff, faculty, and visitors between campus buildings, local living areas, and Westwood Village.

The free Evening Van Service offers a safe, accessible, and convenient mode of transportation around campus at night. Vans transport students between Ackerman Union, westside apartments, Lot 36, campus buildings, and residence halls Monday through Thursday from 6 to 11 p.m. Call 310-825-1493 to request pick-up from most drop-off locations.

UCLA Campus Assault Resources and Education (CARE) Prevention and Education Services—including workshops, self-defense classes, counseling, and referrals—increase physical and psychological preparedness and heighten awareness of the complex issues of rape, sexual assault, and relationship violence. For details, call 310-825-0768.

UCLA Consultation and Response Team (CRT) is a group of professional staff members charged with responding to reports of students in distress, with representatives from the College, Dean of Students, Counseling and Psychological Services, Residential Life, and UCLA Police. The Center for Prehospital Care offers cardiopulmonary resuscitation (CPR) and basic emergency care courses, which can be organized most days and times.
The Office of Environment, Health, and Safety (EH&S) works to reduce workplace hazards on campus and to promote safety at all levels of the University community. EH&S is a consulting resource for UCLA departments and personnel who want to learn how to make the workplace safe. It handles requests for safety information and training, regulatory interpretation and applicability, approval for potentially hazardous procedures, resolution of safety problems, and surveillance and monitoring of persons and workplaces.

Associated Student Services
Founded when UCLA opened in 1919, Associated Students UCLA (ASUCLA) provides services to the campus community through student government, student media, and services and enterprises. Every registered UCLA student is a member of ASUCLA.

Student Government
Many facets of student life at UCLA are sponsored or organized by student government. Getting involved in the decision-making process is rewarding and offers avenues of expression students may not find in other aspects of their university experience.

Graduate Students Association
The Graduate Students Association (GSA) is the official organization representing UCLA graduate and professional students in academic, administrative, campus, and statewide areas. GSA appoints or elects graduate student members to important campus organizations and committees including the Student Fee Advisory Committee and Academic Senate committees. It sponsors graduate student orientation; the Graduate Student Resource Center and Graduate Writing Center; and various graduate student journals, programs, and social events, including the Melnitz Movies film program.

Undergraduate Students Association
Undergraduate student government is embodied in the Undergraduate Students Association (USA). Its governing body, the Undergraduate Students Association Council (USAC), is comprised of elected officers as well as appointed administrative, alumni, and faculty representatives. Every UCLA undergraduate student is a member of USA.

USA activities offer services to the campus and surrounding communities, and give students the opportunity to participate in and benefit from multiple programs. For example, its programs tutor youths and adults, address health needs of ethnic communities, combat poverty and homelessness, and better the environment.

Student government also supports approximately 20 student advocacy groups on campus from the African Student Union to the Vietnamese Student Union.

Campus Events
Each year approximately 40,000 students, faculty, and staff attend programs of the Campus Events Commission (CEC), including a film program, speakers program, and performances by dozens of outstanding entertainers.

The Speakers Program brings entertainers, politicians, and literary figures to campus and presents two annual awards—the Jack Benny Award for comedic excellence and the Spencer Tracy Award for outstanding screen performance. Speakers and awardees have included notables as varied as Bill Gates, Whoopi Goldberg, and Tom Hanks.

The Concert Program brings new and popular performing artists like Rage Against the Machine or A Tribe Called Quest to UCLA for free and affordably priced concerts.

The Cultural Affairs Commission sponsors art exhibits in the Kerckhoff Hall Art Gallery, the JazzReggae Festival, Bruin Bash, Hip Hop Congress, and Worldfest.

Publications, Web, and Broadcast Media
Student publications and media offer a training ground for aspiring writers, journalists, photographers, and media managers while serving the communication needs of the campus community. Most publications offices are in Kerckhoff Hall.

Daily Bruin
The Daily Bruin, with a circulation of 9,000, is one of the largest daily newspapers in Los Angeles. As the principal outlet for campus news, the Bruin is published each weekday of the academic year (once a week during the summer) and is distributed free from kiosks around campus and local areas. Students work as reporters, editors, designers, photographers, videographers, and radio reporters, as well as advertising sales representatives and marketing account executives. New staff members are welcome every quarter.

Newsmagazines
Seven print newsmagazines reflecting the diversity of the campus community are published each term. Al-Talib, Fem, Ha’Am, La Gente, Nommo, OutWrite, and Pacific Ties deal respectively with issues relevant to the Muslim; feminist; Jewish; Chicano, Latino, and Native American; African American; lesbian, gay, bisexual, transgender, and queer; and Asian communities. Each includes news and features on political and cultural affairs both on and off campus. Prospective staffers are welcome.

Online Media
Student Media supports the Bruinwalk.com community portal website. Features include UCLA professor reviews,
used book trading, reviews of apartments near UCLA, and a campus calendar.

**UCLA Radio**

**UCLA Radio** broadcasts live over the Internet and features college alternative, hip-hop, jazz, and world music. It also covers select Bruin football, basketball, and baseball games and airs a lineup of sports talk shows. Studios are in Ackerman Union; all positions, including on-air, news staff, and advertising representatives, are open to students.

**UCLA Yearbook**

The UCLA yearbook, *BruinLife*, is one of the largest student publication efforts on campus. It contains photographs and information on undergraduate students, graduating seniors, athletic teams, fraternities and sororities, and campus activities. Students who would like to participate may contact the yearbook staff.

**UCLA Restaurants**

ASUCLA operates more than a dozen restaurants and two coffee houses on campus, assuring a range of eating options from Italian to sushi. From the residence halls to the student union, a restaurant is never far. Hours vary, especially during summer and holidays. Locations of all the restaurants are posted online.

**UCLA Store**

In terms of sales, the **UCLA Store** is the biggest college store in the nation. There are five locations on campus. Author signings, sales, and other special events are announced in the *Daily Bruin* or on the UCLA Store site.

The UCLA Store—Ackerman Union has eight departments. Textbooks carries required and recommended texts for most undergraduate and many graduate courses, and operates a buyback service so students can sell used texts. BookZone offers reference books and a wide selection of titles in literature, science, history, and technical disciplines, including those by faculty authors. Computer Store carries personal computers, peripherals, accessories, and software at low academic prices. Essentials offers school and office supplies, including printer consumables. BearWear specializes in UCLA emblematic merchandise. Fast Track carries active sportswear and accessories for men and women. Beautique stocks makeup, Clinique skin care, and fashion accessories. Market is a convenience store, with snacks, health and beauty aids, gifts, and greeting cards. Ashe Center-operated **U See LA Optometry** and **Bruin Health Pharmacy** are also housed in Ackerman Union.

**UCLA Store—Health Sciences** specializes in books and supplies for students in dentistry, medicine, nursing, public health, and related areas. UCLA Store—Lu Valle Commons carries art supplies and books, as well as textbooks and supplies for all on-campus Extension courses and selected academic programs (architecture and urban design, art, design, film, information studies, law, management, public policy, social welfare, theater, urban planning). North Campus Shop, South Campus Shop (Court of Sciences), Energy Zone (Wooden Center) and Hill Top Shop in Sunset Village are convenience store locations.

**Other Services and Enterprises**

ASUCLA oversees a variety of other services ranging from a post office to a hair salon. Most are located in Ackerman Union.

Students preparing to graduate can use the **Campus Photo Studio** for their senior yearbook portraits. **Graduation Etc.** sells and rents caps, gowns, and hoods for degree ceremonies; and offers announcements, diploma mounting, and other graduation-related products and services. **Bruin Custom Print** offers copying; binding; and banner, poster, and t-shirt printing. The shop streamlines the process involved in printing custom specialty products that need UCLA licensing and trademark clearance.

**Student Life Services**

From housing to transportation, basic student needs are facilitated by services designed to enhance all aspects of student living.

**Accommodations**

The **UCLA Housing website** is the best guide for finding the right kind of accommodation for different lifestyles and budgets. It includes detailed information about the different residence options, dining plans, support and extracurricular programs, and an online housing application.
On-Campus Housing
Many students, especially those in their first year, choose to live on campus. Besides the convenience, it's a good way to meet other people and to find out about social and academic activities. Four residence halls, four deluxe residence halls, two residential suites, and five residential plazas accommodate over 11,000 undergraduate students. All on-campus housing buildings are coed and within walking distance to classrooms. New freshman and transfer students who are admitted for fall quarter and apply on time are guaranteed housing. Graduate student housing is also available.

Rooms in undergraduate residences are furnished and usually shared between two or three students. Meals are served daily at residential restaurants, and students may choose from a variety of meal plans.

Students apply for on-campus housing at the My Housing website, by the posted deadlines. Students who apply for winter or spring quarter are assigned housing on a space-available basis in the order the application is received. Per-person costs for the academic year vary depending on housing type. See the housing rates web page for current rates.

The Office of Residential Life is responsible for student conduct in residence halls and suites. Its professional and student staff members can counsel students on residential problems.

Sponsored by Residential Life, Living Learning Communities offers students with similar interests an opportunity to live together and participate in programs according to their academic, social, and personal needs and interests. Students can live in communities as varied as gender, sexuality, and society; sustainable living; global health; and various cultures.

Off-Campus Housing
Within walking distance of campus, the University maintains nine undergraduate off-campus apartment buildings for full-time, single transfer, and upper-division students. Apartments vary from singles to three-bedroom units, with bedrooms usually shared by two or three students. Not all types of apartment spaces are available to entering students. Virtual tours are available online.

Married, single-parent, and single graduate students are accommodated in six off-campus apartments; some are located within walking distance of campus, others about five miles from campus and served by a campus shuttle. Apartments include furnished and unfurnished studio and one-, two-, and three-bedroom units. Assignment to several apartments is by wait list; students must be accepted to UCLA to apply.

The Community Housing Office (CHO) publishes information and listings for non-University-owned apartments, cooperatives, private apartments, roommates, rooms in private homes, and short-term housing. Rental listings are updated daily. CHO also has bus schedules, area maps, and neighborhood profiles. A current BruinCard or letter of acceptance is required for service.

Many of the fraternities and sororities at UCLA own fraternity houses. Complete information and membership requirements are published by Fraternity and Sorority Life.

Banking
Automated teller machines representing several major banks are located in Ackerman Union and near restaurants and shops around campus.

The University Credit Union has an office in West Los Angeles and a branch office in Ackerman Union.

BruinCard
The UCLA BruinCard is a mandatory campuswide identification card that can electronically confirm student status and eligibility for services. Supportive photo identification—such as a driver’s license or state ID, passport, or military ID—is required when the card is issued.

The primary BruinCard benefit is convenience. It is a versatile card that serves the following functions: confirmation of student status; ID card for faculty, staff, and students; residence hall access and meal card; laundry, library, and recreation card; debit card (if activated) for purchases at campus stores and restaurants on and off campus; and discounted access to Santa Monica and Culver City bus lines.

Students with an outstanding financial, academic, or administrative hold may not receive BruinCard services until the hold is released by the initiating office. For details on outstanding holds and initiating offices, check MyUCLA.

The BruinCard center is located in 123 Kerckhoff Hall. See the BruinCard website to check account balance, make deposits, view recent transactions, and report lost or stolen cards.

Bruin Resource Center
The Bruin Resource Center (BRC) in the Student Activities Center can help students navigate the campus and its many services by directing them to the correct office or personnel to meet their specific needs.

The center offers services to all UCLA students, including specialized services for transfer and re-entry students, students who are transitioning out of foster care, student parents, and veterans. Additional offerings include workshops and academic courses to help students develop practical skills and knowledge to succeed at UCLA.

The BRC also houses the Veterans Resource Office, which offers services specifically designed to assist students who are U.S. armed forces veterans or current military members.

Career Center
The UCLA Career Center, located in the Strathmore Building, offers career planning and employment assistance free to all UCLA students.
Career Planning and Exploration

Career counselors provide assistance in selecting a major, setting realistic career goals, investigating career options, evaluating graduate and professional school programs, and developing skills to conduct a successful job search. Information on local, national, and international internship opportunities can assist students in exploring different career possibilities, making important professional contacts, and obtaining valuable on-the-job experience. The Career Center library offers a collection of over 3,000 resources, including career-related books and directories, videos, periodicals, and other materials. The Career Center also offers workshops on a variety of career-related topics; many are repeated several times each term.

Employment Assistance

Students who need extra money to finance their college degree can find a large number of part-time, temporary, and seasonal employment leads advertised through the Career Center 24-hour BruinView™ online listings. Students and recent graduates looking for full-time, entry-level career positions may access hundreds of current professional, managerial, and technical openings in numerous career fields. Seniors and graduate students may participate in campus interviews for positions in corporations, government, not-for-profit organizations, elementary and secondary schools, community colleges, and four-year academic institutions. Annual career fairs and special events offer additional opportunities to meet potential employers.

Center for Accessible Education

The Center for Accessible Education (CAE) in A255 Murphy Hall offers academic support services to regularly enrolled students with documented permanent or temporary disabilities in compliance with Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and University policies. Services include campus orientation and accessibility, notetakers, reader service, sign-language interpreters, registration assistance, test-taking facilitation, special parking assistance, real-time captioning, assistive listening devices, on-campus transportation, adaptive equipment, support groups and workshops, tutorial referral, special materials, housing appeals, referral to the Disabilities and Computing Program, and processing of California Department of Rehabilitation authorizations. There is no fee for any of these services. All contacts and assistance are handled confidentially.

For information on the Disabilities and Computing Program, see Services for Study under Student Services earlier in this chapter.

Central Ticket Office

Tickets for UCLA events are available at the Central Ticket Office (CTO) in the James West Alumni Center. As part of its service, the CTO offers students with current BruinCards discount tickets to campus athletic and cultural events and local movies. Students may also purchase tickets to off-campus events through Ticketmaster, as well as student discount tickets for Los Angeles-area buses.

Child Care

UCLA Early Care and Education (ECE) operates three accredited child care centers near the University and student housing. Care is available for children two months to six years old at most centers. Fees depend on the age of the child. A limited number of state grants and partial scholarship subsidies is available for eligible student families.

The ECE Child Care Resource Program helps parents make off-campus child care arrangements and coordinates a Choosing Child Care Forum each month.

University Parents Nursery School is a UCLA-affiliated, parent-participation, multicultural cooperative school for two- through five-year-old children of UCLA students, faculty, and staff. It is located in the University Village Child Care Complex.

Dean of Students/Student Conduct

The Office of the Dean of Students in Murphy Hall helps students, either directly or by referral, with whatever needs they might have. Direct services include general counseling; sending emergency messages to students; and assisting in understanding University policies and procedures, including grievance procedures regarding student records, discrimination, and student debts.

The office publishes Official Notices in the Daily Bruin at various times during the year. Such notices are important, and all students are held responsible for the information in them.

The Student Conduct office administers campus discipline and enforces the standards of citizenship that students are expected to follow at UCLA. Standards involve complying with the policies and regulations governing this campus and being aware that violation of those policies or regulations can result in disciplinary action. Refer to Student Conduct Policies in Appendix A for more information.

International Student Services

International student services, based in Bradley International Hall, offer support for the UCLA international community, particularly for nonimmigrant students. An online orientation program helps international students become familiar with visa regulations, campus life at UCLA, and life in the U.S. Programs throughout the year allow them to share viewpoints with American students and the community.

Dashew Center for International Students and Scholars

The Dashew Center for International Students and Scholars assists students with questions about immigration, employment, government regulations, financial aid, academic and administrative procedures, cultural adjustment, and personal matters. The center seeks to improve student and community relationships; helps international students with language, housing, and personal concerns; and sponsors cultural, educational, and social programs.
The center offers visa assistance for faculty members, researchers, and postdoctoral scholars.

**Lesbian Gay Bisexual Transgender Campus Resource Center**

The Lesbian Gay Bisexual Transgender (LGBT) Campus Resource Center in the Student Activities Center offers education, information, and advocacy services for the UCLA community. The center offers support groups, educational workshops, training seminars, and social activities; and maintains a library of 4,000 books, periodicals, and films. The staff provides confidential assistance and support to students, faculty, and staff who feel they have experienced harassment or discrimination or who wish to connect to the campus LGBT community.

**Office of Ombuds Services**

The Office of Ombuds Services responds to issues and concerns from students, staff, faculty, and administrators. Acting impartially, ombuds persons may investigate unresolved conflicts or facilitate the resolution of problems for which there are no established guidelines; and may also, where possible and when requested, assist in resolving an issue through mediation (including sexual harassment cases). The office is located in the Strathmore Building.

**Parking and Commuter Services**

Parking permits, ridesharing, and other commuting alternatives and services are offered through UCLA Transportation.

**Commuter Services**

Bruin Commuter Services (BCS), 100 Strathmore Building, offers transportation and commuting information so students can get to and from campus without driving a car. Many students form or join existing UCLA carpools or vanpools. Students can use Zimride to find one-time rides or create a carpool. More than 160 vanpools commute to UCLA from 85 Southern California communities, with full- and part-time riding opportunities. The Bruin Com- muter Club offers special benefits and incentives to eligible UCLA students who ride public transit, a UCLA vanpool, or carpool. Students may also rent a car by the hour through Zipcar. BCS can also help students use the extensive Los Angeles-area public transit network.

**Parking Permits**

All commuter students qualify for parking but permits are not guaranteed. Students must be registered for the current term to apply for parking. Parking offers are prioritized according to class level, commuter or campus resident status, and school. Within each category, carpools have priority, and carpool permits are offered at a discounted rate. All carpool members must qualify under the carpool parking requirements. Students who are not offered parking in one term must reapply for parking in the next term.

Students living within ZIP code 90024 must pay the residence hall parking rate. Students living on campus (excluding Regents’ Scholars) must have paid employment, paid internship, or an academic apprenticeship to qualify for parking.

Students with permanent disabilities who have disabled person placards or DMV-issued disabled person license plates, and students with short-term disabilities, may apply to the Center for Accessible Education (CAE) for parking assignments.

**Post Offices**

Campus mail is handled by UCLA Mail, Document, and Distribution Services (MDDS), which offers full-service document processing and delivery for the campus community.

ASUCLA operates a U.S. Postal Service express post office on A Level in Ackerman Union. MDDS operates a U.S. Postal Service contract post office in Wilshire Center off campus.

**Student Legal Services**

Through Student Legal Services in Murphy Hall, currently registered students with legal problems or questions about their legal rights can get assistance from attorneys or law students under direct supervision of attorneys. They help students resolve legal problems, including those related to landlord/tenant relations; accident and injury problems; criminal matters; domestic violence and harassment; divorces and other family law matters; automobile purchase, repair, and insurance problems; health care, credit, and financial aid issues; consumer problems; and University-related issues. Assistance is available only by appointment.

**Veterans Affairs Services**

The veterans affairs benefits officer provides assistance with benefit information, waivers, enrollment certification, and coordinating transitions to and from active duty. For more information see the Registrar’s veteran services web page.

Part of the Bruin Resource Center, the Veterans Resource Office (VRO) helps veterans navigate UCLA and furnishes mentoring, guidance on educational benefits, and tools to succeed academically and personally through a variety of programs and services.

**STUDENT ACTIVITIES**

The opportunities to participate in extracurricular activities at UCLA are virtually unlimited, and are a good way for students to expand their horizons beyond classroom learning.

**Clubs and Organizations**

Joining a club or organization is a great way to meet other students with shared interests and to get involved in campus life.

**Community Programs Office**

The UCLA Community Programs Office (CPO) houses 25 student-initiated community service projects that offer
educational, legal, social, medical, and academic services to underserved communities in Southern California; seven student-initiated outreach projects that seek to improve the number of students from local underserved areas who attend colleges and universities; and five student-initiated retention projects that seek to ensure that all students who enter UCLA actually graduate. CPO programs foster a multicultural and ethnically diverse environment at UCLA.

**Office of Fraternity and Sorority Life**

Fraternities and sororities have been at UCLA since the early 1920s. Today UCLA is home to more than 70 national and local Greek-letter organizations that make up one of the largest Greek systems on the West Coast. The Office of Fraternity and Sorority Life (FSL) interprets University policies, procedures, and regulations, and acts as a liaison between established Greek organizations and the University. It coordinates Greek-letter social organizations that participate in programs such as the Greek Leadership Conference, Greeks against Sexual Assault (GASA), Greek Week, new member forums, dating expectations programs, intramural tournaments, and University-sponsored programs.

**Office of Residential Life**

The Office of Residential Life hosts True Bruin Welcome, the Common Book experience, and brings a variety of programs to the Hill to build a sense of community and offer social enrichment.

**Student Organizations, Leadership, and Engagement**

UCLA has over 1,000 different organizations recognized by Student Organizations, Leadership, and Engagement (SOLE)—more than are found on almost any other university campus in the country. Organizations registered with SOLE include political, recreational, community service, cultural, academic, religious, and residential clubs. It only takes three people to start a new club if their interests are not already represented. SOLE also handles complaints of misconduct against officially recognized student organizations.

**Performing Arts**

Concerts, dance recitals, and theater productions are all part of exceptional programs offered by the Ethnomusicology; Film, Television, and Digital Media; Music; Theater; and World Arts and Cultures/Dance departments, and by the Center for the Art of Performance at UCLA.

**Center for the Art of Performance at UCLA**

Since 1937, the Center for the Art of Performance (CAP) at UCLA has been a premier West Coast showcase for world-class performing artists and ensembles as well as innovative new work in dance, music, theater, and performance art. The center presents more than 200 public concerts and events each year, often sponsoring debut performances of new works by major artists. Through the center, the campus hosts a varied and active performance program, ranging from regular concerts by the Los Angeles Chamber Orchestra to events with The Symphonic Body UCLA, Contra-Tiempo, Peter Sellars, Cassandra Wilson, Anoushka Shankar, Afro Latin Jazz Orchestra, Randy Newman, Bojofondo, Buddy Guy, and Young Jean Lee’s Theater Company. Subject to availability, discount tickets are offered to students, faculty, and staff.

**Department Events**

The Ethnomusicology Department offers students the opportunity to perform in various world music and jazz ensembles that give concerts listed in the department schedule of events.

The Film, Television, and Digital Media Department features student-directed films and television programs throughout the year, and the Theater Department presents a series of major productions to the general public. The School of Theater, Film, and Television annual Design Showcase West and Film Festival is a week-long celebration of film, digital media, animation, screenwriting, and acting that features everything from performance art to the classics.

The Music Department features performances by ensembles ranging from music theater to opera. Its Gluck Outreach Program and Music Partnership Program reach out to the community through free performances throughout Los Angeles and Southern California.

The World Arts and Cultures/Dance Department presents events and concerts involving department faculty members, guest artists, and students. Student performances include MFA concerts, an undergraduate and graduate student-produced concert, and the Senior Concert/Colloquium. Students also perform in more informal programs, such as the end-of-term student works festival or Pau Hana, that feature many world dance forms.

**Sports and Athletics**

UCLA Athletics plays a major role in the University mission to furnish a well-rounded education both in and out of the classroom. UCLA continues to live up to its reputation as a national leader in intercollegiate sports, and ranks first in the U.S. in the number of National College Athletic Association (NCAA) championships won (113). In 2015-16, UCLA men’s and women’s athletic programs placed sixth in the Directors Cup national all-around excellence survey; men and women both placed in the top 10 three times over the last six years in the Capital One Cup. In the 23-year history of the former USA Today survey, the men’s program placed first 11 times.
while the women’s program placed first five times in the final nine years. UCLA was the first university in the country to win five NCAA men’s and women’s championships in a single year (1981-82). UCLA competes as the Bruins, in colors of blue and gold.

UCLA also has produced a record number of professional athletes such as Kareem Abdul-Jabbar, Troy Aikman, Arthur Ashe, Eric Karros, Reggie Miller, Corey Pavin, Jackie Robinson, and Natalie Williams, and Olympians such as gold medalists Gail Devers, Ann Meyers Drysdale, Lisa Fernandez, Jackie Joyner-Kersee, Karch Kiraly, Dot Richardson, Peter Vidmar, and Natasha Watley.

Athletic Facilities

The major indoor arena at UCLA is the famed Pauley Pavilion, which seats approximately 13,800 for UCLA basketball, volleyball, and gymnastics events. It was the site of the 1984 Summer Olympics gymnastics competition. Immediately adjacent, Drake Stadium is the home of UCLA track and field and soccer competitions and site of many outdoor events, including the 1991 U.S. Olympic Festival. The Spieker Aquatics Center is home to the UCLA water polo, swimming, and diving teams. The Los Angeles Tennis Center, a 5,800-seat outdoor tennis stadium and club house, was the site of the 1984 Olympic tennis competition. Easton Softball Stadium, which seats 1,300, is the home of the women’s softball team. The Morgan Intercollegiate Athletics Center houses the UCLA Athletic Hall of Fame and the actual personal den of Coach John Wooden. Off-campus facilities include Jackie Robinson Stadium for varsity baseball and the renowned Rose Bowl in Pasadena, home of the UCLA football team.

Intercollegiate Sports

UCLA Athletics is a member of the Pacific-12 Conference. Men’s teams have won an overall total of 74 NCAA titles—second highest in the nation—including 19 in volleyball, 16 in tennis, 11 in basketball, 10 in water polo, eight in track and field, four in soccer, two each in golf and gymnastics, and one each in baseball and swimming. Students can participate on the varsity level in baseball, basketball, cross country, football, golf, soccer, tennis, track and field, volleyball, and water polo.

Women’s teams have won an overall total of 39 NCAA titles—second highest in the nation—including 11 in softball, seven in water polo, six in gymnastics, five in track and field, four in volleyball, three in golf, two in tennis, and one in soccer. Students can participate on the varsity level in basketball, beach volleyball, cross country, golf, gymnastics, rowing, soccer, softball, swimming and diving, tennis, track and field, volleyball, and water polo.

UCLA Recreation

To help students learn new skills, meet people with similar interests, relieve stress, and increase fitness, UCLA Recreation (UREC) oversees programs from intramural sports to outdoor adventures.

Intramural and Club Sports

The UCLA intramural sports program consists of team, dual, and individual sports competition in tournament or league play. Over 1,800 teams and 8,000 participants compete throughout the year in various sports activities ranging from basketball to water polo. UCLA students and recreation membership holders are eligible. Varying skill levels are offered in almost all activities, and the emphasis is on friendly competition.

Club sports offer students the chance to organize, coach, or participate in sports that fall beyond the scope of intramurals but are not offered at the varsity level. Coed teams exist in archery, badminton, boxing, climbing, cycling, dragon boat, equestrian, fencing, figure skating, golf, gymnastics, judo, kendo, power lifting, quidditch, running, sailing, ski and snowboard, squash, surf, swim, table tennis, taekwondo, tennis, track and field, triathlon, water skiing, wrestling, and wushu. Separate men’s and women’s teams exist in basketball, lacrosse, rugby, soccer, ultimate, volleyball, and water polo. There are also men’s teams in baseball, ice hockey, and rowing; and a women’s team in softball.

Outdoor Adventures

Outdoor Adventures offer students the chance to get away and enjoy the wonders of local and distant mountains and waterways. Activities designed for beginning to experienced outdoors people include bike rides, UCLA Challenge Course, camping, rock climbing, scuba diving, windsurfing, canoeing, kayaking, and hiking.

Class Programs

Noncredit instructional classes in arts, dance, fitness sports, golf, kayaking, martial arts, outdoor adventures,
rock wall, rowing, sailing, standup paddling, surfing, swimming, tennis, water aerobics, windsurfing, yoga, and a variety of group fitness programs are offered for beginning and intermediate levels. Private lessons in tennis, fitness activities, swimming, racquetball, martial arts, golf, and other activities are also available. Fitness is offered either as a recreation class or on a drop-in basis.

Facilities
For registered students who prefer independent recreation and exercise, UREC offers access to many facilities. The John R. Wooden Recreation and Sports Center has multiple gymnasia; basketball, volleyball, and badminton courts; handball/racquetball/squash courts; a weight training facility, rock climbing wall, exercise/dance and martial arts studios; and a games lounge. Sunset Canyon Recreation Center offers activities in an outdoor park setting that features a 50-meter swimming pool, 25-yard family pool, picnic/barbecue areas, play fields, outdoor amphitheater, six lighted tennis courts, sand volleyball court, two multipurpose sports courts, and various meeting rooms and lounges, as well as a Challenge Course. The UCLA Marina Aquatic Center offers sailing, windsurfing, kayaking, rowing, surfing, and other activities. Students also have the use of Pauley Pavilion, Drake Stadium, Sycomore Tennis Courts, Los Angeles Tennis Center, intramural fields, Student Activities Center, and Kaufman Hall for recreational sports and activities.

UCLA ALUMNI ASSOCIATION
Through 82 years of serving the UCLA community, the UCLA Alumni Association has more than 92,000 members, making it one of the largest alumni groups in the nation. Whether a person is a recent graduate, a pioneer Bruin, or somewhere in between, membership in the Alumni Association is the best way to stay connected to UCLA and its growing excellence.

Membership dues enable the Alumni Association to serve as an advocate on campus and to play the vital role of guardian of the value of every UCLA degree. Dues also support programs such as Beat SC Bonfire and Rally, I Love UCLA Week, Locks of Love, Dinners for 12 Strangers, Spring Sing, Alumni Day, senior events, class reunions, career events, and the scholarship program.

The association offers many benefits and services, including alumni career and travel services. Members make friends, pursue lifelong learning, save money, and make a difference. UCLA graduates, Bruin parents, and friends of the University are invited to take advantage of all the association has to offer. Offices are in the James West Alumni Center.
Undergraduate Study

Undergraduate students at UCLA can earn degrees of Bachelor of Art and Bachelor of Science in over 126 majors in the College of Letters and Science and five professional schools: Henry Samueli School of Engineering and Applied Science; Herb Alpert School of Music; School of the Arts and Architecture; School of Nursing; and School of Theater, Film, and Television.

In addition to its record of academic excellence, UCLA offers undergraduate students an extraordinary opportunity to participate in undergraduate research, internships and community service, a variety of undergraduate programs and seminars, and prepares the next generation for leadership roles after graduation.

SHARED GOVERNANCE

Undergraduate degree programs, courses, and requirements are governed by the Undergraduate Council, College and school faculty executive committees, and committees for general education, Writing II, and diversity requirements.

Undergraduate Council

The Undergraduate Council is a standing committee of the UCLA Academic Senate. The council is responsible for the establishment of policy and standards for undergraduate education at UCLA, recommends to the Legislative Assembly programs that lead to new degrees, and delegates authority to College and school faculty executive committees.

Undergraduate Education Division

Led by the Dean and Vice Provost for Undergraduate Education, the Undergraduate Education Division is a campuswide advocate for undergraduate education. Among its goals are to enrich the quality of the academic experience of undergraduate students, help students find meaningful pathways to timely degree completion, and prepare students for life after college. The division oversees the general education curriculum and offers programs including Fiat Lux seminars, cluster courses, and New Student and Transition Programs, as well as the Academic Advancement Program, College Honors programs, Center for Undergraduate Research, and the Center for Community Learning.

UNDERGRADUATE ADMISSION

Undergraduate Admission
1147 Murphy Hall
310-825-3101
http://www.admission.ucla.edu

Prospective UCLA undergraduate students should give careful thought to adequate preparation in reading, writing, mathematics, laboratory sciences, languages, visual and performing arts, and other subject areas related to a degree objective or major. To be competitive, UCLA applicants need to present an academic profile much stronger than that represented by the minimum UC admission requirements.

UCLA Undergraduate Admission invites prospective students to visit UCLA for individual or group tours of the campus. Reservations are required. See the tours website.

Applying for Admission

Prospective students may apply for admission to UCLA for the fall quarter, by completing the UC Application for Admission and Scholarships.

One application is used for all nine UC campuses with undergraduate programs. Students apply to one UC campus with a nonrefundable application fee; an additional fee is charged for each additional campus. Students may only apply to one College or school at UCLA.

When to Apply

All majors and programs in the College of Letters and Science; Henry Samueli School of Engineering and Applied Science; Herb Alpert School of Music; School of the Arts and Architecture; School of Nursing; and School of Theater, Film, and Television are open for fall quarter. The application filing period is November 1 through 30 of the prior year. See the UCLA Applying for Admission web page for up-to-date information on application procedures.

Notification of Admission

The UC Application Center e-mails notices to acknowledge receipt of applications. Subsequently, UCLA Undergraduate Admission notifies students of the admission decision. Fall quarter freshman applicants are notified beginning in late March and transfers in late April.

Students who are offered admission are asked to submit a Statement of Intent to Register and a Statement of Legal Residence. A nonrefundable deposit, also required at this time, is applied to the Student Services Fee as long as students register in the term to which they are admitted.
Entrance Requirements

Entrance requirements established by the University follow the guidelines set forth in the California Master Plan for Higher Education, which requires that the top 12.5 percent of the state’s high school graduates be eligible for admission to the University of California. Requirements are designed to ensure that all eligible students are adequately prepared for university-level work.

Fulfilling the minimum admission requirements does not assure admission to UCLA. Admission is based on demonstrated high scholarship in preparatory work going well beyond the minimum eligibility requirements. High school honors level and Advanced Placement courses are good preparation regardless of the desired major. UCLA offers admission to those students with the best overall academic preparation, viewed in the context of the applicants’ academic and personal circumstances, extracurricular and volunteer experiences, and the overall strength of the UCLA applicant pool. For details, see the admission website.

Admission as a Freshman

Students are considered freshman applicants if they have not enrolled in a regular session of any college-level institution since graduation from high school. Students who attend summer session immediately following high school graduation are still considered freshman applicants.

Minimum Admission Requirements

To be considered for admission as a freshman, students must meet the subject, grade-point average (GPA), and examination requirements.

Subject Requirement

The subject requirement, sometimes called A to G requirements, is a sequence of high school academic courses required for admission to the University. Each course must be completed with a grade of C or better. The requirement consists of 15 year-long courses, with 11 completed by the end of the junior (eleventh grade) year. These are the minimum requirements; students should exceed these requirements whenever possible.

A. History/Social Science. Two years of history/social science, including one year of world history, cultures, and geography, and one year of U.S. history or one-half year of U.S. history and one-half year of civics or American government

B. English. Four years of college preparatory English that include frequent and regular writing, and reading of classic and modern literature, poetry, and drama. No more than one year of ESL-type courses can be used to meet this requirement

C. Mathematics. Three years of college preparatory mathematics that include the topics covered in elementary and advanced algebra and two- and three-dimensional geometry (four years are recommended, including trigonometry and calculus). Approved integrated mathematics courses may be used to fulfill part or all of this require-

ment, as may mathematics courses taken in the seventh and eighth grades if the high school accepts them as equivalent to its own mathematics courses

D. Laboratory Science. Two years of laboratory science (three years are recommended) that supply fundamental knowledge in at least two of the three foundational subjects: biology, chemistry, and physics. Advanced laboratory science courses that have biology, chemistry, or physics as requisites and offer substantial new material may be used to fulfill this requirement. The last two years of an approved three-year integrated science program that supplies rigorous coverage of at least two of the three foundational subjects may also be used to fulfill this requirement

E. Language Other than English. Two years (or the equivalent of the second level of high school instruction) of the same language other than English (three to four years are recommended). Courses should emphasize speaking and understanding and include instruction in grammar, vocabulary, reading, composition, and culture. American Sign Language and classical languages such as Greek and Latin are acceptable. Courses in languages other than English taken in the seventh and eighth grades may be used to fulfill part or all of this requirement if the high school accepts them as equivalent to its own courses

F. Visual and Performing Arts. One year-long visual and performing arts course selected from dance, drama/theater, music, or visual art

G. College Preparatory Electives. One year (two semesters), in addition to those required in A to F above, selected from the following areas: history, English, advanced mathematics, laboratory science, language other than English (a third year in the language used for the E requirement or two years of another language), social science, and visual and performing arts (nonintroductory-level courses)

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<thead>
<tr>
<th>Subject Requirement Summary</th>
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<tr>
<td>A. History/Social Science</td>
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<td>F. Visual and Performing Arts</td>
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<tr>
<td>G. College Preparatory Electives</td>
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Grade-Point Average Requirement

California residents are eligible for admission to the University of California with a 3.0 grade-point average; nonresidents are eligible with a 3.4 GPA. Minimum eligibility does not guarantee admission to UCLA.

Examination Requirement

All freshman applicants must submit scores from either the ACT with Writing test, the SAT Reasoning Test (last administered in January 2016), or the SAT with Essay test. The tests should be taken by December of the senior year, as they are part of the review process. Students should
request that test results be sent directly to UCLA when they take the test.

Admission Selection
UCLA selects students using a carefully designed holistic evaluation process that takes into account an applicant’s achievements, both academic and nonacademic, in the context of the opportunities available to the student. Among other factors, holistic evaluation specifically considers academic grade-point average; performance on standardized tests; the quality, quantity, and level of coursework taken; sustained participation in activities that develop academic and intellectual abilities; leadership and initiative; employment and personal responsibilities; and overcoming life challenges related to personal or family situations.

Because admission requirements and selection criteria may change, freshman applicants should see the Freshman Admission Process web page for the most complete and up-to-date information.

Admission as a Transfer Student
Students are considered transfer applicants if they have enrolled in a regular fall, winter, or spring session at another college or university or in college-level extension courses. (This does not include attending a summer session immediately following high school graduation.) Students may not disregard their college record and apply for admission as a freshman.

In accordance with the California Master Plan for Higher Education, first preference is given to California community college applicants. Applicants transferring from other UC campuses are next in priority, followed by applicants transferring from other colleges and universities. Each application receives a holistic evaluation, integrating all available information. Students attaining senior standing are generally not admitted.

Academic criteria are as follows: junior-level standing (60 semester/90 quarter transferable units completed) by the end of the spring term before transfer, grade-point average in transferable courses, significant preparation for the major, completion of the English composition and mathematics requirements, and progress toward completion of the Intersegmental General Education Transfer Curriculum (IGETC), another UC campus general education requirements, or UCLA general education requirements.

For details on transfer admission requirements, refer to the transfer admission web page.

Intercampus Transfers
Undergraduate students registered in a regular session at any University of California campus (or those previously registered who have not since registered at any other school) may apply for transfer to another campus of the University. Submit the UC Application for Transfer Admission and Scholarships with the required application fees. The filing periods and admission requirements are the same as those for new applicants. Students who have attended another UC campus and wish to be considered for admission to UCLA must have been in good standing when they left that campus. Intercampus transfers are not automatic; students must compete with all other applicants.

Transfer Credit and Credit by Examination
The University awards unit credit to transfer students for certain courses completed at other accredited colleges and universities. To be accepted for credit, the courses must be comparable to those offered at the University, as determined by Undergraduate Admission. All courses that meet the criteria are used in determining eligibility for admission.

To convert semester units into quarter units, multiply the semester units by 1.5. For example, 12 semester units x 1.5 = 18 quarter units.

College credit for examinations given by national testing services is generally not allowed, except for the AP Examinations given by the College Board and the International Baccalaureate higher-level examinations. See the Transfer Credit website for more information.

International Applicants
To be considered for admission to the University of California, international students must have completed secondary school with a superior average in academic subjects and have earned a certificate of completion that would enable them to be admitted to a university in the home country.

The application for admission, copies of official certificates, and detailed records of all secondary schools attended should be submitted as early as possible after the filing period opens. This allows time for the necessary correspondence and, if students are admitted, to obtain passport visas.

Proficiency in English
Students whose native language is not English must have sufficient command of English to benefit from instruction at UCLA. First-year undergraduate students who have not
otherwise satisfied the Entry-Level Writing requirement and who have not taken the Analytical Writing Placement Examination (AWPE) by the time they enter UCLA must take the AWPE in their first term at UCLA. Results of the AWPE are reviewed to determine whether students should complete the English as a Second Language (ESL) requirement, prior to satisfying the Entry-Level Writing requirement. If held for the ESL requirement, students must complete the requirement by taking the designated credit-bearing courses.

In addition, they are advised to take the Test of English as a Foreign Language (TOEFL) as a preliminary means of testing their ability. Test results should be sent directly to UCLA Undergraduate Admission.

Second Bachelor’s Degree
By policy, second bachelor’s degrees are not generally granted.

REGISTRATION
Registrar’s Office
1113 Murphy Hall
310-825-1091, option 6
http://www.registrar.ucla.edu

Registration consists of paying fees and enrolling in classes.

1. Registration fees and other University charges are due the 20th of each month. BruinBill accounts can be viewed through MyUCLA.

2. Enrollment in classes is completed through MyUCLA.

Students must complete both processes by the established deadlines to be officially registered and enrolled for the term.

Paying Fees
Details on fee payment, enrollment procedures, and deadlines are on the Registrar’s website.

E-bill
BruinBill accounts are administered electronically (e-bill) through MyUCLA. Financial activity is displayed for the current term, as well as account activity for the last 24 months. MyUCLA also links to important communications from the University regarding registration and University policies. Students can pay their BruinBill account electronically using electronic checks with no fee, or American Express, Discover, MasterCard, and VISA credit cards with a fee.

Annual Undergraduate Fees
Although the exact cost of attending UCLA varies, there are some fees that all UCLA students must pay. UCLA does not charge on a per-unit basis. Each entering and readmitted student is required to submit a Statement of Legal Residence. Students classified as nonresidents of California must pay annual nonresident supplemental tuition in addition to registration fees. Legal residents of California are not required to pay nonresident supplemental tuition. For a definition of residence and nonresidence, see Appendix A.

The Student Services Fee covers student expenses such as counseling, facilities, registration, graduation, and health services. The fee is charged whether or not students make use of these services.

All fees are subject to change without notice by the Regents. Current academic year fees and updated information is available on the Registrar’s annual fees web page.

Instructional Enhancement Initiative Fee
The Instructional Enhancement Initiative (IEI) Fee supports technology in undergraduate education. The fee helps support course websites and online tools, computer laboratories, and software.

Course Materials and Services Fees
The College of Letters and Science and each school are authorized to assess course materials and services fees. Some course materials and services fees are assessed based on actual enrollment at the end of the fourth week of classes. Students are responsible for ensuring that all study list errors and omissions are corrected prior to the end of the second week. All students in a course with an approved course materials and services fee are assessed the fee, regardless of major. The fee is nonrefundable. Students who are approved for a Late Add enrollment in a course after the third week are required to pay the course materials and services fee, which is billed through BruinBill, for the entire term.

Fee amounts are available on the Registrar’s course fees web page.

Miscellaneous Fees
Miscellaneous fees include charges for late registration fees payment. Late fees also apply if students file their study list late or do not pay off BruinBill balances on time. Fees are charged if any check is returned by a bank for any reason. Charges are assessed for most petitions and other special requests. Study list, document and service, transcript-related, and degree and diploma fees are published on the Registrar’s website.

Student Health Insurance Fee
All undergraduate students are automatically assessed for and enrolled in the University of California Student Health Insurance Plan (UCSHIP) as a condition of registration at UCLA. Continued enrollment in a qualified health insurance plan is mandatory during all registered terms. UCSHIP components are medical, vision, dental, and behavioral health services.

The UCSHIP fee is billed each term along with other UCLA fees. UCSHIP fulfills all requirements mandated for a qualified health insurance plan as defined by the University of California. The Ashe Student Health and Wellness Center is the primary health care provider for UCSHIP, and where all nonemergency medical care is initiated.
If students withdraw during a school term, they may continue to use the Ashe Center on a fee-for-service basis for the remainder of the term, effective from the date of the withdrawal.

**Waiving UCSHIP**

Students may waive UCSHIP if they maintain active enrollment in a qualified health insurance plan that meets all established requirements, apply for a waiver within established deadlines each term, and correctly complete the online waiver form. Students are responsible for providing complete and accurate information. Third-party individuals may not waive UCSHIP for a student. Waivers must be submitted before the term fees payment deadline. Deadlines are strictly enforced, and no refunds are issued after the deadline. For more information, see the waiving UCSHIP web page.

**Immunization Requirements**

UCLA requires that all incoming students be vaccinated against or show immunity to multiple infectious diseases consistent with guidelines of the American College Health Association, California Department of Public Health, and U.S. Centers for Disease Control and Prevention (CDC). These requirements help protect the health of students and the entire campus community. Students submit their immunization history to the Ashe Center secure patient portal. See the Ashe Center website for more information.

**Fee Refunds**

Students who formally withdraw from the University may receive partial refunds of fees. For information on withdrawal, see the Academic Policies chapter of this catalog or consult the Registrar's refunds web page for policy details and specific refund deadlines for each term.

**Fee Waiver Requests**

Late registration, processing, and penalty fees are waivable on request in writing to the office assessing the fees only if they were incurred through the fault of the University or because a student suffered sudden and debilitating injury or accident.

**Reduced Fee Programs**

UCLA recognizes the need for part-time study in special circumstances. Undergraduate resident students—when properly approved by the dean of their College/school for enrollment in 10 units or less—may be eligible for a one-half reduction in tuition. The reduction is based on total units enrolled as of Friday of the third week of classes. Students should contact their College or school for eligibility requirements.

File a Fee Reduction Request with the academic dean's office by Friday of the second week. Except for these qualified and approved part-time students, there is no reduction in tuition, or in the student services, student union, Wooden Center, student programs, activities, and resources complex (SPARC), or Undergraduate Students Association fee.

Undergraduate nonresident students with College or school approval for enrollment in 10 units or less pay only half the nonresident supplemental tuition fee. File a Fee Reduction Request with the College or school office by Friday of the second week of classes for the applicable term.

Full-time University employees may apply for a reduction of tuition and the student services fee at their Campus Human Resources office. Students who use the part-time fee reduction may not also use the UC employee reduction.

**Enrolling in Classes**

New students should see an academic counselor before enrolling in classes (counseling is required in the Henry Samueli School of Engineering and Applied Science). Counselors help new students select courses and formulate a schedule tailored to their academic interests or degree objectives.

**New Student Orientation** takes new students through a step-by-step process designed to ensure that they enroll in an effective program.

**Enrollment**

Students enroll in classes through MyUCLA during assigned times—called enrollment appointments—when they are allowed to enroll. The Class Planner feature allows students to create class plans prior to enrollment, share plans with counselors, and quickly add classes during their enrollment appointment. Students use the Find a Class or Section feature to search the Schedule of Classes and add available classes to their class plan or study list. MyUCLA is also used to view enrollment appointments, drop classes, change grade type and number of units, exchange classes, and view one's study list, which includes information on class meeting times, final examinations, classmates, grades, textbooks, and class websites. For more information, see the Registrar's study list and enrollment policies web pages.

For classes that require written approval or specialized processing, students may enroll in person Monday through Friday from 9 a.m. to 4 p.m. at 1113 Murphy Hall.

**Study List**

A study list is the record of courses a student is enrolled in for the term. At 11:59 p.m. on Friday of the second week of instruction the study list of enrolled courses becomes official, and all wait lists are eliminated. Students should verify their study list through MyUCLA after each enrollment transaction. Students are responsible for all courses and the grading basis as listed on MyUCLA and cannot receive credit for courses not listed.

After Friday of the second week, most changes to the official study list can be made with a fee through MyUCLA. Some changes require an Enrollment Petition along with approval signatures.
See the study list web page for deadlines and complete instructions. Errors or omissions should be corrected before the College or school deadlines for changes by petition. Unapproved withdrawal from or neglect of a course entered on the study list results in a failing grade.

**Wait List**

Some departments establish wait lists for classes that are full. If a student in the class drops, the seat is filled by a student on the wait list. Students can check enrollment status through MyUCLA. Position on a wait list does not indicate enrollment. Students on a wait list should not assume they will be added to a class.

Wait lists are maintained through Friday of the second week of instruction unless a department deletes them earlier.

**Concurrent Enrollment**

Concurrent enrollment—defined as taking courses during regular sessions for credit at UCLA and, at the same time, at a non-UC institution, including UCLA Extension—is not permitted except in extraordinary circumstances, and no credit is given for such courses unless the approval of the UCLA College or school has been obtained by petition prior to enrollment.

**Intersegmental Cross-Enrollment Program**

Undergraduate students enrolled in any campus of the California community colleges, the California State University, or the University of California may enroll without formal admission in a maximum of one course per academic term at a campus of either of the other systems at the discretion of the appropriate campus authorities on both campuses on a space-available basis per the California Education Code sections 66755 and 66756 (amended by California Senate Bill 361 passed in 1999). Enrollment in precollege courses is excluded.

UCLA students qualify for intersegmental cross-enrollment if they meet all the following requirements:

1. Complete at least one term at UCLA as a matriculated student
2. Enroll for a minimum of 6 units for the current term
3. Earn a grade-point average of 2.0 (C) for work completed
4. Pay appropriate tuition and fees at UCLA for the current term
5. Complete appropriate academic preparation as determined by the host campus
6. Have California resident status

Obtain a concurrent enrollment application from the College or school. An administration fee is charged for each academic term such enrollment is requested.

**Intercampus Visitor Program**

Undergraduate students enrolled at one campus of the University of California may have the opportunity to attend another UC campus for one quarter or semester on the Intercampus Visitor Program. Observe the deadlines on the application. Applications are reviewed by a student’s College or school. Letters and Science students should consult College Academic Counseling in A316 Murphy Hall; Arts and Architecture students should contact the Student Services Office in 2200 Broad Art Center; Music students should consult the Office of Student Services and Enrollment Management in 1642 Schoenberg Music Building; Theater, Film, and Television students should consult the Student Services Office in 103 East Melnitz Building; Engineering students should contact the Office of Academic and Student Affairs in 6426 Boelter Hall.

**Simultaneous UC Enrollment**

Undergraduate students may enroll simultaneously in courses offered by another UC campus. Eligible students must be registered (fees paid), in good standing, and enrolled in at least 12 units at UCLA. Students may simultaneously enroll in no more than one UC host-campus course not to exceed 6 units. Before attending the host campus, both campuses must give approval. Approval to enroll simultaneously on another UC campus does not guarantee credit toward specific degree or general education requirements. Application of host-campus courses to UCLA graduation requirements is determined by the College or school. Details are on the application form. Obtain applications and directions for submitting forms from the following offices: honors students, A311 Murphy Hall; student athletes, Morgan Center; AAP students, 1209 Campbell Hall; all other Letters and Science students, College Academic Counseling, A316 Murphy Hall; Arts and Architecture, Music, Theater, Film, and Television, Engineering, and Nursing students, their respective Student Affairs Office. The application is also available on the Registrar’s website.
The deadline for filing all undergraduate financial aid applications for the regular academic year is March 2. Applications received after the deadline are considered late, and limited aid is offered.


Applying for Financial Aid
Students do not need to come from low-income families to qualify for financial aid. However, those who apply for need-based aid—including grants, loans, work study, and some scholarships—must demonstrate financial need, which is defined as the difference between the cost of attending UCLA and the amount that they and their families should be able to contribute.

No financial aid can be awarded to international students in their first year of attendance at UCLA.

Students attending UCLA Summer Sessions, Summer Travel Programs, Summer Institutes, or UC Cross-Campus Summer Programs and in need of financial aid must submit a summer financial aid application in addition to the Free Application for Federal Student Aid (FAFSA). Summer applications are available on MyUCLA (under the Finances and Jobs tab).

To qualify for aid, students must also comply with minimum progress standards, which set unit and grade-point average requirements as defined in the Appendix of this catalog.

Free Application for Federal Student Aid
To evaluate financial need, all citizen and permanent resident students who apply for aid must provide financial information on the Free Application for Federal Student Aid (FAFSA). If students are financially independent according to the federal financial aid guidelines, their own financial circumstances are analyzed rather than those of their parents. The University expects that students and their families bear as much of the cost of a student's education as their circumstances permit.

The FAFSA is used to apply for all federally funded programs, funds administered by UCLA, and Cal Grants administered by the California Student Aid Commission. Loans that are not need based are also available to all students who complete the FAFSA. Students should complete the FAFSA online by March 2. Be sure to indicate that the data is to be sent to UCLA by using the UCLA Title IV code: 001315.

California Dream Act Application
Students who are not citizens or permanent residents but who are eligible for Assembly Bill 540 nonresident fee waivers may be eligible to qualify for scholarships and University grant aid if they complete a California Dream Act Application online. The priority filing deadline for University grant consideration is March 2.

Prospective Student Scholarships
In addition to using the FAFSA to apply for aid, prospective students who apply to UCLA with the UC Application for Admission and Scholarships may use the application to apply for undergraduate scholarships.

Continuing Student Scholarships
Scholarship applications for continuing students can be submitted on MyUCLA (under the Finances and Jobs tab). Students should begin their search early and continue it throughout the year, as scholarships across campus have differing deadlines. The Scholarship Resource Center can also help with a thorough search for UCLA and outside scholarships.

Types of Financial Aid
The four basic types of aid are scholarships, grants, loans, and work-study employment. Financial Aid and Scholarships usually offers a combination of different award types to most applicants.

Aid can be merit based—awarded on the basis of standards such as academic achievement, or need based—awarded on the basis of financial need as determined by the financial aid application. Scholarships managed by Financial Aid and Scholarships are based on merit and need. Grants, loans, and work study are generally need based.

Scholarships
The Undergraduate Scholarship Program at UCLA rewards academic excellence and assists with the expenses of an undergraduate education.

Financial need is required for University and named (endowed) scholarships other than those listed below. Each year approximately $300,000 is awarded from the many different scholarship funds. Awards range from $100 to $3,000 and are not automatically renewable. Entering students apply for scholarships on the UC Application for Admission and Scholarships. If admitted to UCLA, new students also have the opportunity to add additional information to their scholarship profile, so they can be considered for other scholarships that open throughout the academic year. Continuing students should begin their search early and continue it throughout the year, as scholarships across campus have differing deadlines.

In addition to applying for University scholarships, students are encouraged to apply for outside scholarship funding via search engines such as FastWeb, GoCollege, and others.

Regents Scholarships
One of the highest honors conferred on an undergraduate student is the Regents Scholarship, which is awarded for four years to students entering from high school and for
two years to entering juniors. A UCLA faculty committee selects Regents Scholars on the basis of exceptional academic achievement and promise. Scholars receive a yearly honorarium if they have no financial need. Scholars who establish financial need by filing the FAFSA or California Dream Act application receive a combination of grants and scholarships to cover the amount of their need. Regents Scholars also receive special privileges.

**UCLA Alumni Scholarships**

The Alumni Scholarships Program is one of UCLA's oldest and most prestigious scholarships programs on campus. Since 1936, a select group of distinguished Bruins have had the honor of being known as Alumni Scholars. Recipients are selected by alumni volunteers throughout the U.S. for the following programs:

- **Community College Transfer Alumni Scholarship (CCTS).** For students transferring to UCLA from a California Community College with a 3.75 grade-point average. Financial awards are $4,000 over a two-year tenure.
- **Freshman Alumni Scholarship.** Awards prospective freshmen who have demonstrated academic excellence, powerful leadership, and a desire to effect positive change. Financial awards for freshmen range from $4,000 to $20,000 over a four-year tenure.
- **Lew and Edie Wasserman Grant.** Sophomore and Junior Alumni Scholars may apply to receive additional financial assistance. Applicants are evaluated on a combination of academic merit and financial need.
- **National Finals Competition.** Every April, top-scoring UCLA freshman scholarship applicants participate in the competition to potentially increase their base scholarship award up to $20,000 paid over four years. This competition is a 30-year tradition of the Alumni Scholarships Program.
- **Need-Based Scholarship.** First-year Alumni Scholars who complete a FAFSA and have demonstrated financial need may also receive up to $5,000 for the first year in addition to their scholarship award.
- **Out-of-State Scholarship.** Offers an outstanding opportunity for highly accomplished students from outside California to fund their UCLA education.

**Ralph Bunche Freshman Alumni Scholarship.** Continues the legacy of Dr. Ralph J. Bunche (class of 1927), first-generation college student who went on to become class valedictorian, a Nobel Peace Prize winner, and a founder of the United Nations. Bunche Scholars exemplify Dr. Bunche's experiences, come from all walks of life, and are invaluable to the UCLA community.

**True Bruin Distinguished Senior Award.** Awarded to highly meritorious students who exemplify the True Bruin values of integrity, excellence, accountability, respect, and service. True Bruin Distinguished Seniors receive up to $5,000 and are recognized and celebrated for the skills, knowledge, and leadership experiences they have demonstrated on campus and in their community.

**UCLA Alumni Legacy Scholarship.** For academically talented undergraduate students who have a parent or guardian who is a UCLA degree holder. The applicant must be admitted to UCLA under the standard admissions process.

Being an Alumni Scholar is more than just receiving a scholarship. Awardees are automatically enrolled in the esteemed Alumni Scholars Club where they are involved in campus events and organizations with like-minded students, increase their connections throughout the University, and attain skills that will benefit their professional career well after graduation.

For additional information, see the Alumni Association scholarships website.

**ROTC Scholarships**

ROTC scholarships are awarded on a competitive basis to U.S. citizens regardless of parents' income. Scholarships supply tuition, a book allowance, fees, and a tax-free monetary allowance during the academic year. Scholarship applications and information are available online at the [Air Force](https://www.gofair.com), [Army](https://www.army.mil), and [Navy/Marine Corps](https://www.marinestudies.nps.edu) websites.

Completed four-year scholarship applications should be submitted by December 1 (Air Force), January 31 (Navy/Marine Corps), or February 28 (Army) of the year preceding college matriculation. Two- (Army and Navy/Marine Corps) and three-year scholarship applications are also available, and are considered when received.

**Grants**

Grants are based on need and do not have to be repaid. When awarding policies and funds permit, the financial aid package includes a grant.

**Federal Pell Grants**

Federal Pell Grants are based on exceptional need. They are awarded to undergraduate students who are U.S. citizens or eligible noncitizens and who have not earned a bachelor's degree. Amounts for 2017-18 range from $606 to $5,920 for students enrolled full time. Students who file the FAFSA are automatically considered for a Pell Grant. Eligibility is determined by the federal government. Award amounts depend on a student's Estimated Family Contribution (EFC) and whether enrollment is full time or below. Awards are reduced for students enrolled less than full time.
**Loans**

Loans allow students to postpone paying some of the costs of their education until they have completed school. A financial aid offer includes a long-term, low-interest loan.

Borrowers must realize their commitment and responsibility to repay according to repayment schedules. Before accepting a loan, students should assess their total educational debt and ability to repay after graduation. The University makes every effort to assist students during the repayment of their obligation, but University services, including registration and the release of official transcripts, are withheld if the loan becomes delinquent. Seriously delinquent accounts are referred to a professional collection agency for action.

All first-time borrowers must complete a debt management session at the [student loans website](#) before funds are released. Parent and graduate PLUS borrowers whose loans are approved on appeal or with an endorser are also required to complete a mandatory counseling session at the [Federal Student Aid website](#) in addition to the debt management session.

All loan recipients must complete an exit interview with the Loan Services Office, A227 Murphy Hall, before leaving UCLA for any reason. This interview helps students understand their loan agreement and their rights and responsibilities. If students fail to participate in an exit interview, the University places a hold on their academic records and registration materials. Exit information is mailed to students by the Loan Services Office after receipt of notification of separation from the University.

**Federal Perkins Loans**

Low-interest Federal Perkins Loans are awarded to eligible, on-time applicants who are U.S. citizens or eligible noncitizens; eligibility is subject to availability of funding. The loan limit per academic year is $5,500 for undergraduate students and $8,000 for graduate and professional students. The actual award amount may be less, based on annual funding and UCLA’s institutional awarding policy. The loan interest rate is 5 percent. Loan repayment and interest accrual begin either six or nine months after graduation or dropping below half-time enrollment.

**William D. Ford Federal Direct Loan Program**

**Direct Loans**

Direct Loans are low-interest subsidized and unsubsidized loans financed by the U.S. Department of Education. Subsidized Direct Loans are awarded to undergraduate students who have demonstrated financial need. Interest rates are fixed and adjusted by the U.S. Department of Education annually; contact Financial Aid and Scholarships for additional information. Interest accrues immediately after students graduate or drop below half-time enrollment. Repayment begins six months after students leave school or drop below half-time enrollment.

Unsubsidized Direct Loans are available to undergraduate, graduate, and professional students who are U.S. citizens or eligible noncitizens regardless of income. Interest accrues from the date of disbursement, but students can avoid the extra costs of accrual by making regular interest payments while in school.

**Direct PLUS Loans**

Direct PLUS Loans are designed to help graduate students and parents of undergraduate students meet the total cost of education. Graduate students and parents may be eligible to borrow up to the cost of education for the academic year less any other financial aid received. This loan is...
available only to borrowers who do not have adverse credit histories. The interest rate is fixed and annually adjusted by the U.S. Department of Education. Contact Financial Aid and Scholarships for information on current interest rates. Borrowers may want to consult a tax adviser to see if the interest is tax deductible.

Private Loans
Private loans are available to students who have received the maximum award amounts under the Direct Loan Program and require additional funding. These loans are sponsored by banks and private lending institutions. Interest rates and re-payment schedules vary. These loans must be certified by Financial Aid and Scholarships before funds can be disbursed. A list of private lenders that UCLA borrowers have used in the past is available at Financial Aid publications web page.

Short-Term Loans
Students need not be receiving financial aid to apply for a short-term loan. They may borrow up to $200 for immediate emergency needs; the amount is repayable on the 20th of the month following the month in which the loan was made. To qualify, applicants must be registered UCLA students with satisfactory loan repayment records. Applications are available from the Loan Services Office, A227 Murphy Hall.

Work-Study Program
The Federal Work-Study Program (FWS) is intended to stimulate and promote part-time student employment, particularly for students from low-income families who are in need of earnings to pursue their studies. Under FWS, the federal government pays a portion of the students’ wage and the employer pays the balance. Through this program, students may work up to 20 hours per week for the University, government agencies, or public and private nonprofit agencies. Students employed through FWS supply essential services to the University and community and have the opportunity to hold jobs that may relate to their educational objectives or enable them to gain valuable work experience.

MAJORS AND DEGREES
Students may choose from over 126 majors in a wide variety of disciplines offered through the undergraduate degree programs of the College of Letters and Science, School of the Arts and Architecture, Henry Samueli School of Engineering and Applied Science, Herb Alpert School of Music, School of Nursing, and School of Theater, Film, and Television. For a complete list of major programs and degrees, see the table in the front of this catalog.

Planning a Major
New students should obtain academic counseling before enrolling in classes at UCLA. Counselors can help new students formulate degree objectives based on interests, abilities, and career goals. As students begin to decide on a major, counselors can help them start fulfilling College or school requirements as well as the department requirements necessary for completion of the degree program.

Declaring a Major
Regulations and procedures for declaring a major vary for the College and each school. Students in the College of Letters and Science do not need to declare a major in their freshman year and can attend with an undeclared major until the end of their sophomore year. Certain schools require students to choose a major when applying for admission, or require early declaration. Check specific policies for declaration with the school or department adviser.

All students must declare a major by the beginning of their junior year (90 quarter units). To declare a major, obtain a Petition to Declare a Major at the College or school office. There is no fee for the petition.

Capstone Majors and Programs
Capstones are designed to be the culmination of a UCLA undergraduate experience. Capstones range from yearlong sequences of courses or tutorials to a single seminar, and from honors theses to comprehensive seminar projects or internships. They may be based in tutorials, laboratories, advanced courses, or seminars, and may include either individual or team-based projects. Requirements vary among the college and schools. Capstone majors and programs are identified throughout the Curricula and Courses chapter of this catalog. See the Capstone Initiatives website for more information.

Capstone Options
Four types of capstone options represent different expectations for student engagement and independence. Some students might complete capstones of more than one type. For example, having completed an advanced seminar, a student might decide to engage in independent study or an honors project.

Honors Thesis or Project
In a multi-term program, students conduct independent research, laboratory, writing, or other work guided or
mentored by faculty. The program culminates in a formal thesis or project that can be granted department honors.

**Individual Major**
Highly motivated students who find that no single major accommodates their specific interest in a given subject may propose their own major. Proposals are designed with faculty guidance and sponsorship, and thoroughly examined for cogency, completeness, and academic merit.

**Individual Project**
Students may propose an individual project or paper as the culmination of an upper-division contract course they create with their instructors.

**Senior Seminar or Advanced Project**
Students may enroll in an advanced senior seminar or project course that requires a comprehensive term paper, performance, or product design.

**Individual Majors**
Highly motivated students who find that no single major accommodates their specific interest in a given subject may propose designing their own major. Proposals are prepared with faculty guidance and sponsorship and are thoroughly examined for cogency, completeness, and academic merit. Requirements for individual majors vary among the College and schools.

**Changing Majors**
Changing majors requires the approval of the department of the new major. Changing majors involving a change in College or school requires the approval of the College or school. To change majors, obtain a Program Change Petition at the department office or online.

**DEGREE REQUIREMENTS**
As soon as they are accepted for admission to UCLA, new students should learn the requirements necessary to receive a bachelor’s degree and begin planning an appropriate program of study. All undergraduate students must satisfy University requirements, College or school requirements, and department requirements.

**University Requirements**
The University of California has established two requirements that all undergraduate students must satisfy in order to graduate: Entry-Level Writing or English as a Second Language (ESL), and American History and Institutions. It is each student’s responsibility to see that these requirements are fulfilled.

**Entry-Level Writing**
Because proficiency in English composition is so important to successful performance in many courses, Entry-Level Writing is the only requirement for graduation that students must satisfy before entering UCLA or during their first year in residence. They may meet this requirement by

1. Scoring 3, 4, or 5 on one of the College Board Advanced Placement Examinations in English OR
2. Scoring 5, 6, or 7 on one of the International Baccalaureate Higher Level English A Examinations or scoring 6 or 7 on one of the International Baccalaureate Standard Level English A Examinations OR
3. Scoring 680 or better on the SAT Reasoning Test, Writing (last administered in January 2016) OR
4. Scoring 30 or better on the ACT English Language Arts test OR
5. Scoring 30 or better on the ACT Combined English/Writing test (last administered in June 2015) OR
6. Presenting transfer credit for an acceptable college-level course in English composition (passed with a grade of C or better) at another institution OR
7. Passing the University of California Analytical Writing Placement Examination (all freshmen from California high schools should have taken the examination during the month of May before they enrolled; others take an examination at UCLA early in their first term)

If students do not meet the requirement in one of the ways described above, Academic Senate regulations require them to enroll in a course determined by performance on the Analytical Writing Placement Examination as early as possible during their first year in residence. Each course must be taken for a letter grade and passed with a grade of C or better. Students receiving a final grade of C– or less must repeat the course during their next term in residence. Satisfaction of the Entry-Level Writing requirement is a requisite to English Composition 3 and all subsequent English courses.

For more information, see the Entry-Level Writing website.

**English as a Second Language**
All entering UCLA undergraduate students whose native language is not English and who have not otherwise satisfied the English as a Second Language (ESL) requirement or who are directed to do so by UCLA Undergraduate Admission are required to take either the Analytical Writing Placement Examination (AWPE) for first-year undergraduate students or the English as a Second Language Placement Examination (ESLPE) for transfer students. Neither the Test of English as a Foreign Language (TOEFL) nor any other English proficiency test can be submitted or accepted in lieu of the AWPE or ESLPE. Students may take the AWPE or ESLPE once only. Unauthorized retakes of the examinations result in an invalid examination score.

First-year undergraduate students who have not otherwise satisfied the Entry-Level Writing requirement and who have not taken the AWPE by the time they enter UCLA must take it in their first term at UCLA. Results of the AWPE are reviewed to determine whether students should complete the ESL requirement prior to satisfying the Entry-Level Writing requirement. If held for the ESL.
requirement, students must complete the requirement by taking the designated credit-bearing courses.

Transfer students who have completed the English Composition 3 and English 4W equivalent courses at their transfer institution may still be held for the UCLA ESL requirement at the discretion of UCLA Undergraduate Admission. This includes, but is not limited to, all students who received a grade below B in either of these equivalent courses. Transfer students held by UCLA Undergraduate Admission to the ESL requirement must take the ESLPE prior to or during the term in which they are to register. Failure to sit for the ESLPE results in a hold on student records. Depending on the ESLPE results, students may be required to successfully complete one or more credit-bearing courses in the English Composition series.

Students must begin taking courses during their first term in residence at UCLA and must complete each course in sequence with a grade of C or better (C– or a Passed grade is not acceptable). All units are applied toward graduation but cannot be applied toward general education requirements.

American History and Institutions
The American History and Institutions requirement is based on the principle that a U.S. citizen attending an American university should understand the history and public institutions of the U.S. under the federal and state constitutions. Candidates for a bachelor's degree must satisfy the American History and Institutions requirement by one of the following methods:

1. Completing a year's course in American history or American government, or a one-year combination of both, in high school with an average grade of B or better OR

2. Completing any one of the following UCLA courses with a grade of C or better, or a grade of Passed:
   - Asian American Studies M171D
   - Chicana and Chicano Studies M159A, M159B, CM182, M183
   - Economics 183
   - Gender Studies M147B, M147D
   - Study of Religion M142C

3. Equivalent courses completed in UCLA Extension or at another college institution, and accepted by the Board of Admissions, may be used to fulfill the requirement OR

4. Presenting a satisfactory result of the requirement, by examination, as administered at another college or university within the state OR

5. Scoring 500 or better on the SAT Subject Test in U.S. History OR

6. Scoring 3, 4, or 5 on the College Board Advanced Placement Test in American History.

Candidates for an instructional credential, but not for a degree, must take one of the following courses: History 143A, 143B, Political Science 145B, or 145C.

Students attending the University on an F-1 or J-1 visa may petition for exemption from this requirement by showing proof of temporary residence in the U.S. For more information on this requirement, contact the undergraduate History Department counselor in 6284 Bunche Hall.

College or School Requirements
The College and each school with undergraduate programs establish their own degree requirements. These generally include a unit requirement that defines the total number of units to be completed, scholarship requirement that defines a minimum grade-point average, residence requirement that defines the amount of study that must be undertaken in residence at the UCLA campus, and course requirements that may include general education courses, reading and composition courses, foreign language courses, and core courses for the field of study. See the College and Schools chapter of this catalog for details on requirements set by the College and by each of the schools.

Department Requirements
Each department or interdepartmental program sets its own degree requirements in addition to those established by the College or school. Department requirements generally include preparation for the major, which are lower division courses designed to prepare students for advanced study and the major, which are upper division course requirements. Requirements for each department are listed in the Curricula and Courses chapter of this catalog.

Degree Policies
Students are responsible for degree policies and regulations as described in the Academic Policies chapter of this catalog.

UNDERGRADUATE RESEARCH

Undergraduate Research Centers
The Undergraduate Research Centers (URC) assist students in the arts, humanities, social sciences, and behavioral sciences (URC Humanities, Arts, and Social Sciences, A334 Murphy Hall) and in science, engineering, and mathematics (URC Sciences, 2121 Life Sciences) by supporting scholarly, critical, and creative research. The centers offer mentoring and tutorials, manage the Student Research Program (SRP), and administer summer research
programs, academic year research programs, research stipends, and scholarships. They also sponsor two student-run publications—the Undergraduate Science Journal and the Aleph humanities and social sciences journal; organize campuswide conferences and events; and coordinate the Student Research Forum that promotes a broader and deeper understanding of university research and helps entry-level student researchers define their place in the larger research community. See the undergraduate research website.

Student Research Program
Administered by each Undergraduate Research Center, the Student Research Program (SRP) offers undergraduates, especially lower division and first-year transfer students, opportunities to become actively involved in the University research community. Working with faculty members on research projects, SRP students gain valuable research training and experience, as well as preparation for advanced undergraduate work and graduate school. Students enroll in course 99 in any department and receive 1 unit of course credit for each 30 hours of research completed during the term. Science, engineering, and mathematics students should see the sciences SRP website. Arts, humanities, social sciences (HASS), and behavioral sciences students should see the HASS SRP website.

Undergraduate Research Fellows Program
The Undergraduate Research Fellows Program (URFP) is available on a competitive basis and by application for undergraduate students seeking entry-level research experience. Funded students typically participate in two terms of research (winter and spring quarters) through SRP. Science, engineering, and mathematics students should see the sciences URFP website. Arts, humanities, social sciences (HASS), and behavioral sciences students should see the HASS URFP website.

Undergraduate Research Scholars Program
The Undergraduate Research Scholars Program (URSP) offers scholarships from foundations, industry, and individual donors to continuing students (junior-level standing and higher). Applicants must have a strong commitment to research and must complete an honors thesis or a comprehensive independent studies project during the senior year. Applications are accepted during spring quarter for the following academic year. Science, engineering, and mathematics students should see the sciences URSP website. Arts, humanities, social sciences (HASS), and behavioral sciences students should see the HASS URSP website.

Academic Research Courses
All academic departments offer undergraduate research courses that allow students to obtain academic credit for their research experiences. Students enrolled in the courses are often upper division students with Student Research Program experience. Department requirements for credit vary, but all departments require a research proposal to enroll in upper division tutorial courses and a research report to receive credit when the research project is completed. Senior students working toward honors or highest honors in many majors must complete a two-term (or more) research project that culminates in an honors thesis. Arrangements must be made with a faculty mentor before students can register for the course. See the undergraduate adviser in the department of interest for more information.

INTERNERSHIPS AND SERVICE PROGRAMS
Rewarding opportunities in the form of internships, community service work, industry and business positions, local, national, and international programs, and community-based teaching furnish students with insights into a range of professional fields and the chance to apply academic theories firsthand.

Career Center

Internship and International Opportunities
The UCLA Career Center, located in the Strathmore Building, offers advice and leads for internships, fellowships, and other experiential learning opportunities in the U.S. and abroad. Many helpful resources are featured in the second floor Career Laboratory and online. Options for current students and graduates include teaching or volunteering abroad, research or fieldwork, and internships in almost every occupation or industry. The Hire UCLA Ambassadors Team advises students on search techniques to identify relevant employers and programs. All career counselors and peer advisers also offer support for students eager to gain hands-on experience. See the internships website.

DC Fellows Summer in Washington Program
The DC Fellows summer internship program supports students from all majors and class levels who are seeking summer work experience in Washington, DC. Assignments are available with elected officials, government agencies, public interest groups, international organizations, media, and a wide range of public and private sector organizations. The fellows program offers advice on searching and applying for internships, as well as housing support and the option to apply for alumni-sponsored scholarships. For more information, see the program website.
Quarter in Washington, DC
The Center for American Politics and Public Policy (CAPP) selects undergraduates each fall, winter, and spring to participate in its Quarter in Washington Program. The program offers an exciting opportunity to combine UC courses with research and field experience. Students live at the UC Washington Center for up to 12 weeks, dividing their time between coursework and a part-time internship placement. They can earn credit in multiple majors. The core course, a research development seminar, is multiple-listed in political science, sociology, communication studies, and history; meets the capstone requirement for the Public Affairs minor; and is eligible for College Honors consideration. The internship placement fulfills the internship requirement for the Civic Engagement minor. At least one course in a subject other than political science, such as economics or history, is usually offered each quarter. All courses take advantage of Washington’s unique resources for study and research.

UC Washington Center administrators help students find a field placement that complements a substantial research project. Placements have included ABC News, the Brookings Institution, CNN, the Department of Justice, the Kennedy Center, Studio Theatre, the Center for Strategic and International Studies, and various members of Congress.

Reserve Officers’ Training Corps
The University of California, in accordance with the National Defense Act of 1920 and with the concurrence of The Regents, offers courses and programs in military training. This voluntary training allows students to qualify for an officer’s commission in the Army, Navy, Air Force, or Marine Corps while completing their college education. ROTC courses are offered by three departments within the College of Letters and Science: Aerospace Studies (Air Force), Military Science (Army), and Naval Science (Navy and Marine Corps). Equipment, uniforms, and textbooks are supplied. The programs supply a monthly stipend to eligible students while on contract and additional financial benefits, including tuition and fee scholarships, to qualified students. Individual programs are described in the Curricula and Courses chapter of this catalog.

Teaching Opportunities
Exciting teaching programs prepare undergraduate students for careers in teaching or education and allow them to serve in classrooms in the Los Angeles area. Many teaching opportunities are offered in conjunction with the Graduate School of Education and Information Studies (GSE&IS), which helps coordinate programs leading to various instructional credentials or to graduate study.

Education Studies Minor
The Education Studies minor offers a sequence of core and elective courses designed to introduce students to key issues, research, and policies in education. Students participate in a range of seminar and practicum courses to fulfill program requirements. The program office is in 1009 Moore Hall. See the minor website and the program description in the Curricula and Courses chapter of this catalog.

Joint Mathematics/Education Program
The Joint Mathematics/Education Program (JMEP), offered jointly by GSE&IS and the Department of Mathematics, leads to a teaching credential and master’s degree in education for mathematics majors pursuing a career in secondary school teaching. The program offers courses in education for students completing courses required for a Bachelor of Science degree in a major within the Department of Mathematics. During their senior year, participants serve as teaching interns in an observational teaching program under the direction of a teaching coordinator. During the year following graduation, students take additional graduate courses and teach full-time in a secondary classroom with a full salary. For information, contact the Mathematics Student Services Office, 6356 Mathematical Sciences.

Mathematics for Teaching BS
The Mathematics for Teaching capstone major is designed primarily for students planning to teach mathematics at the high school level. It exposes students to a broad range of mathematical topics, especially those appropriate for the prospective teacher. Students who complete the major and meet the conditions of the Mathematics Department’s California-approved subject matter program are eligible for a waiver of the California Single Subject Teaching Credential in Mathematics (CSET). For information, contact the Mathematics Student Services Office, 6356 Math Sciences. See the teaching credential website. At the end of their senior year, students may request a letter from the Mathematics Student Services Office verifying their completion of these courses and thus their subject matter competence for the CSET. See the degree description in the Curricula and Courses chapter of this catalog.

Science Education Minor
The Science Education minor is designed for students who wish to become middle school and high school science teachers and is also attractive to students who plan to teach as graduate students in their disciplines. The minor supplies the broad general science background included in California state subject matter credential examinations, selected coursework required for entry into a variety of postbaccalaureate credential programs, and field experiences in the development, management, and teaching of science laboratory instruction in grades 7 through 12, including Advanced Placement Tests. See the minor website and the program description in the Curricula and Courses chapter of this catalog.

Science Teacher Education Program
The Science Teacher Education Program (STEP), cosponsored by the College of Letters and Science and GSE&IS, allows science majors to observe and participate in classrooms in schools in the Los Angeles area and to begin teacher education courses in their senior year. Students earn a preliminary teaching credential the summer after the bachelor’s degree is received and a master’s in educa-
tion the following academic year. For details, see the STEP program website or contact any science department undergraduate counseling office.

Teacher Education Program
The Teacher Education Program allows students to obtain both a Master of Education degree and a preliminary multiple or single subject credential in a full-time, two-year program that supplies clinical classroom experience and a full-year urban teaching residency.

Teaching Secondary Mathematics Minor
The Teaching Secondary Mathematics minor is designed for students majoring in fields other than mathematics who plan to teach secondary mathematics after graduation. The minor recognizes completion of requisite coursework for the Joint Mathematics Education Program, and prepares students for the contents on the California Subject Examination for Teachers (CSET). Post-bachelor credentialing programs see that students with this minor have taken coursework on secondary mathematics from an advanced standpoint that is recommended by the Conference Board of Mathematical Sciences and the California State Commission on Teacher Credentialing. This minor is not open to students in any Mathematics Department major. See the program description in the Curricula and Courses chapter of this catalog.

UCLA California Teach
The UCLA California Teach program encourages and supports undergraduate students who are interested in exploring K-12 mathematics and science teaching as a potential career. Courses include 24 hours of observation, participation, and assisting in K-12 schools, and seminars to support those field experiences.

Visual and Performing Arts Education Minor
The Visual and Performing Arts Education (VAPAE) minor in the School of the Arts and Architecture is an interdisciplinary and interdepartmental series of courses designed to introduce students to key issues and methodologies in the field of arts education for multiple publics and to a broad range of careers in the arts, including K-12 teaching, museum education, community arts education, creative arts therapies, and arts advocacy.

The arts education teaching sequence, an important component of the minor, consists of three courses in which selected undergraduate students explore core issues in arts education, creativity, and social justice. Students are assigned to K-12 classrooms in the Los Angeles area where they first observe and then implement an eight-week sequential arts-based lesson plan under the supervision of the guiding teacher. The program office is in 2101 Broad Art Center. See the minor website and the program description in the Curricula and Courses chapter of this catalog.

UCLA Center for Community Learning
The UCLA Center for Community Learning serves faculty members, undergraduate students, and community partners through academic courses and programs, including credit-bearing internships, service learning courses, community-based research, AmeriCorps programs, and the Astin Scholars program. It is home to the undergraduate minor in Civic Engagement. The office is in A265 Murphy Hall.

University of California Center Sacramento
The University of California Center Sacramento (UCCS) is operated by UC Davis. The center's long-term goal is to bring together UC faculty members with undergraduate students to pursue research related to state government, politics, and public policy. UCCS places students in intensive one-term policy-related internships throughout the State Capitol Building and in the Sacramento policy community. UCCS is open to all juniors and seniors with a 3.0 grade-point average.

LOWER-DIVISION SEMINAR PROGRAMS

Collegium of University Teaching Fellows
The Collegium of University Teaching Fellows (CUTF) offers outstanding graduate students the opportunity to develop and teach lower division seminars in their area of expertise. These unique courses cover all areas, from the humanities to the life, physical, and social sciences. Undergraduate students take courses that are at the cutting edge of a discipline and benefit from a small-seminar environment. GE and honors credit is granted for most seminars, which are offered in Winter and Spring quarters only. Enrollment is limited. For further information, contact the Office of Instructional Development, 70 Powell Library Building.
Honors Collegium

The Honors Collegium, a series of interdisciplinary honors courses, offers a unique educational experience where students learn how to think critically and creatively and how to communicate effectively. Courses emphasize the breadth of an interdisciplinary approach to learning and focus on small classes and individual attention.

Fiat Lux Freshman Seminar Program

Fiat Lux seminars offer students an opportunity to share ideas in class—an important academic skill that can be acquired only through practice. These 1-unit, Passed/Not Passed seminars, taught by distinguished faculty members from across UCLA, introduce freshman students to topics of intellectual importance and encourage them to participate in critical discussions with a small group of peers. The program takes its name from the motto of the University of California: Fiat Lux—Let There be Light! For details about seminar offerings each term, see the Schedule of Classes.

Undergraduate Student Initiated Education

The Undergraduate Student Initiated Education (USIE) program offers a select group of juniors and seniors the opportunity to develop and facilitate, under the faculty supervision, a 1-unit, Passed/Not Passed, lower-division seminar for their peers. Students apply and are selected during the spring quarter. During the following fall and winter quarters, selected students work with their faculty mentors and enroll in a pedagogy course to prepare the seminar, which is offered in the ensuing spring quarter. Undergraduates may enroll in a USIE seminar twice during their career.

ADVISING AND ACADEMIC ASSISTANCE

Academic assistance is available in the form of staff and student counselors, faculty advisers, student services, tutorials, and special programs.

New Student and Transition Programs

UCLA New Student and Transition Programs welcome new undergraduate students to UCLA and ease their transition into and throughout the first year. New Student Orientation introduces students to UCLA through academic counseling and educational planning and orients students to all the special programs available to them. During orientation, students work in small groups with peer counselors and gain insight into necessary academic skills. They learn how to plan their academic program and become familiar with educational opportunities, student services, and facilities available at UCLA. Individual counseling sessions help students adjust to University life and fulfill the advising requirements of the College or school. Sessions for family members are also offered.

New Student Orientation sessions are three-day, two-night, residence hall live-in programs for first-year students; and one-day programs for transfer students. There is a fee for participation.

New Student and Transition Programs also offers the College Summer Institute (CSI), a six-week residential program in which new first-year students get a head start on graduation requirements through UCLA summer courses. During the academic year, additional programs offer academic advising and successful transition to the second year. For more information, contact the New Student and Transition Programs office in 201 Covel Commons.

College and School Advisers

The College and each school and academic department at UCLA have a staff of academic counselors and advisers to help students plan their academic program, monitor their progress toward the bachelor's degree, provide information about degree requirements, and assist with academic problems.

Students in the College are served by one of four counseling units: Academic Advancement Program, College Academic Counseling, Honors Programs, and Student Athletics. Undergraduates in the five professional schools are served by their respective student services offices. See the Registrar's academic counseling website for a list of College and school advising office addresses. To contact a departmental adviser, see the individual department in the Curricula and Courses chapter of this catalog; a list is available online.

Academic Advancement Program

Academic Advancement Program (AAP) is the largest university-based student diversity program in the U.S. Its programs for first-generation, low-income, and historically underrepresented students help ensure their academic success, retention, and graduation; and support their pursuit of academic excellence. AAP aims to increase member entrance to graduate and professional schools; develop academic, political, scientific, economic, and community leadership; and promote UCLA access and academic success for diverse high school and community college students across California.

Students are eligible for AAP if their academic profiles and personal backgrounds may impact their university experience and their retention and graduation from UCLA. Students are also eligible if they are part of any federally funded program that requires counseling, tutoring, or mentoring. For more information, contact AAP New Student Programs, 1230 Campbell Hall.

Academic Counseling

AAP professional and peer counselors are available for College students. For more information see the College and Schools chapter of this catalog.
Center for Community College Partnerships (CCCP)
The center develops academic partnerships between California community colleges—particularly those with large underrepresented populations—and UCLA, to improve student competitiveness for UC admissions and increase the transfer admission pool diversity. Its Scholars Program offers mentoring and summer programs to help prepare students for transfer to a four-year school.

Mentoring and Research Programs
AAP programs also help students attain their academic and professional goals beyond the bachelor's degree.

Arts Initiative Program
The program focuses on integration of the arts into different scholarly fields. AAP students engage in interdisciplinary research involving fine, commercial, and performing arts and their connection to social contexts.

Community Development and Social Justice Program (CDSJ)
The program assists AAP students interested in graduate study in public health, public policy, social welfare, and urban planning. Students conduct applied research projects and intern, under professional staff supervision at a community-based organization.

Educators for Tomorrow (EFT)
The program assists a new generation of socially conscious educators. AAP students, guided by a graduate mentor, participate in community service programs, internships, service learning courses, and research.

Graduate Mentoring and Research Program (GMRP)
The program offers AAP students one-on-one mentoring by current graduate students in preparation for graduate studies and professional school admission. It also offers workshops on graduate school topics.

High Achievement in Math and Science (HIGH AIMS) Program
The two-year program supports AAP students seeking further learning in health science professions. It offers career and academic guidance, and includes community service, workshops, and information sessions.

McNair Research Scholars Program
The two-year program prepares 28 AAP students for PhD programs in humanities and social sciences. Students conduct an independent research project and participate in a research-intensive summer program.

Research Rookies Program
The program gives second-year AAP students the opportunity to develop entry-level research projects in humanities and social sciences. Over two academic terms, students meet regularly with graduate mentors and a faculty member.

Peer Learning
AAP peer learning facilitators are upper-division AAP students who serve as academic role models and tutors. Small-group workshops help build scholarship skills and foster discussion that allows students to listen to, and articulate, new and different perspectives.

Scholarships
Eligible AAP students may receive merit and need-based scholarships through established financial aid programs. AAP also awards scholarships; its scholarships web page helps students with the application process.

Freshman/Transfer Summer Program
This seven-week residential summer program prepares incoming AAP freshman and transfer students for the academic rigor of UCLA. Students build an academic support network that supplies interaction and broadens life experiences. Students enroll in three UCLA courses that fill graduation requirements, and get support in small groups or individual sessions from teaching assistants and peer learning facilitators.

Vice Provost Initiative for Precollege Scholars (VIPS)
This partnership between UCLA and the Los Angeles and Pasadena school districts prepares historically underrepresented students in 10 high schools to become competitively eligible for admission to UCLA and other flagship universities. VIPS offers peer mentoring, summer programs, Saturday academies, and research opportunities to scholars and their families.

ACADEMIC EXCELLENCE
Eligible students receive the following honors and awards in recognition of academic achievement:

Dean’s Honors List
The School of the Arts and Architecture, Henry Samueli School of Engineering and Applied Science, Herb Alpert School of Music, School of Nursing, School of Theater, Film, and Television, and the deans of the five divisions in the College of Letters and Science award Dean’s Honors to deserving students each term. Honors are based on the grade-point average attained within a specified number of units. Consult with the College or school for further information.

Latin Honors
The College and schools award Latin honors according to overall grade-point average at graduation. To be eligible students must have completed at least 90 (98 for the School of Nursing) University of California units for a letter grade. The levels of honors are summa cum laude, magna cum laude, and cum laude. Specific requirements vary for each level and are detailed in the College and
Schools chapter of this catalog. See the Registrar's honors web page for the most current calculations of Latin honors.

**Departmental Honors**

In the College of Letters and Science, departmental honors and highest honors are awarded at graduation on the recommendation of a student's major department, based on successful completion of a departmental honors program. Students should consult with their department for its requirements.

**Departmental Scholar Program**

Departments in the College of Letters and Science and each school—except the Herb Alpert School of Music; School of Nursing; and School of Theater, Film, and Television—may nominate exceptionally promising juniors and seniors as Departmental Scholars to pursue bachelor's and master's degree programs simultaneously. Nominations are submitted to the College or school dean for recommendation to the dean of the Graduate Division. Students interested in becoming Departmental Scholars should consult their departments well in advance of application dates for graduate admission (see the calendar at the beginning of this catalog).

**Honor Societies**

**Alpha Lambda Delta and Phi Eta Sigma**

Alpha Lambda Delta and Phi Eta Sigma are national honor societies that recognize high achieving first-year students. Membership is based solely on academic achievement and is by invitation only. To be eligible students must have a 3.5 grade-point average with 12 graded University of California units in the first quarter of their first year at UCLA, or a cumulative 3.5 GPA at the end of the first year. Invitations are issued in winter quarter, and an induction ceremony is held during spring quarter. For more information, contact the Office of the Dean of Students, 1104 Murphy Hall.

**Golden Key**

Golden Key is an international interdisciplinary academic honors organization dedicated to excellence. Students qualify on the basis of objective academic criteria. Students with sophomore, junior, and senior standing, with a cumulative grade-point average at the time of invitation, are eligible.

The society recognizes and encourages scholastic achievement and excellence in all undergraduate fields of study. It unites with collegiate faculties and administrators in developing and maintaining high standards of education and promotes scholastic achievement and altruistic conduct through voluntary service. Invitations are issued annually. For more information, contact the Office of the Dean of Students by e-mail.

**Mortar Board**

Mortar Board is a national honor society for college seniors that recognizes outstanding and continual scholarship, leadership, and service to the campus community. To be considered for membership, candidates must have completed 90 units and must have attained at least a B average or be in the highest 35 percent scholastically of the junior class, whichever is higher. Applications are available online early in winter quarter and are due by mid-February. Approximately 35 members are selected each spring by the outgoing chapter. For more information, contact the Office of the Dean of Students, 1206 Murphy Hall.

**Phi Beta Kappa**

Phi Beta Kappa is a national academic honors society in the humanities, liberal arts, and sciences, founded at the College of William and Mary in 1776. Membership is conferred for high scholastic standing and is determined by vote of the UCLA Eta Chapter council according to scholarship records. Students do not apply for Phi Beta Kappa membership.

At UCLA only graduating seniors and selected juniors are elected to membership. The annual election is held in late April, with the initiation ceremony in June. At present, the minimum grade-point average considered is 3.67 (for 140 or more UC units); the minimum number of UC units considered is 90 (students at the 90-unit level must have at least a 3.85 GPA).

A reasonable distribution of courses in the humanities and sciences is also required, as is a foreign language course at the intermediate level (one level above the UCLA language requirement for graduation) or above. A Passed grade is computed approximately as a B, depending on number of courses taken and graded units. Students who are elected are notified by a MyUCLA e-mail notification.

For more information, contact Phi Beta Kappa in the UCLA Scholarship Resource Center, 233 Covel Commons.

**Tau Sigma**

Tau Sigma is a national honor society that recognizes the high academic achievement of first-year transfer students. To become a member, UCLA students need to earn a 3.5 grade-point average or better during their first term at UCLA after transferring either from a community college or a four-year institution (summer quarter not typically included). Invitations are issued after each regular academic term, and an induction ceremony is held during spring quarter.

Tau Sigma honors the large UCLA transfer community for its academic achievement. The society also holds leadership, networking, and social activities. For more information, contact the Dean of Students Office in 1104 Murphy Hall or by e-mail.
Graduate Study

Graduate students at UCLA benefit from—and contribute to—the resources of one of the country’s outstanding research universities. A distinguished faculty committed to research and teaching; an extensive library system ranked among the best in the nation; and excellent research centers, institutes, and laboratories in virtually every major discipline all provide extraordinary opportunities for graduate endeavor.

Graduate training at UCLA takes place in classrooms, laboratories, and libraries; in specialized seminars; through independent research; and in teaching experiences. Graduate education is enriched by several hundred postdoctoral and visiting scholars from other universities who engage in research and, in some instances, teaching at UCLA every year. This unique research environment promotes the quality of original work and study that is the hallmark of graduate education.

The degree of Master of Arts or Master of Science, or one of several professional degrees such as Master of Business Administration, is intended to develop mastery of a field and prepare students for the practice of a profession. The doctorate degree (PhD, EdD, and so forth) is designed to prepare students for creative activity and original research, often in association with college or university teaching.

SHARED GOVERNANCE

Graduate degree programs, courses, and requirements are governed and administered by the Graduate Council, Graduate Division, College and school faculty executive committees, and department advisers.

Graduate Council

The Graduate Council is a standing committee of the UCLA Academic Senate. The council is responsible for the establishment of UCLA policy and standards for master, doctorate, and graduate professional degree programs (other than those in law, medicine, and dentistry) and postdoctoral scholars; the approval, review, and monitoring of graduate degree programs; and recommendations about fellowships and assistantships. It also recommends to the systemwide Coordinating Committee on Graduate Affairs programs that lead to new degrees and delegates authority to Graduate Division and College and school faculty executive committees.

Graduate Division

The UCLA Graduate Division administers policy established by the Academic Senate and its Graduate Council. It oversees graduate recruitment and admissions (including recruitment of a diverse student body), fellowships, teaching assistantships, graduate student researcher appointments, and other graduate student support; and maintenance of high quality standards in all graduate programs. The dean of the Graduate Division also serves as vice provost of graduate education.

Graduate Adviser

At matriculation, a graduate student usually selects or is assigned a graduate adviser who assists in program planning and completion of degree requirements. Sometimes this role is temporarily assumed by a faculty adviser assigned to the program as a whole. When the student’s master or doctoral committee is established, the chair of the committee assumes the adviser’s role.

GRADUATE ADMISSION

Diversity, Inclusion, and Admissions
1237 Murphy Hall
310-206-3411
https://grad.ucla.edu/admissions/

Meeting the minimum requirements does not ensure graduate admission, which is limited by the number of places and the amount of student support available in UCLA graduate programs. Applicants are evaluated on scholastic qualifications and formal preparation for the graduate field of study. Departments may have other requirements for admission, which are listed by department and by degree on the Graduate Division website.

Applying for Admission

Prospective students apply online. A nonrefundable application fee is required when the application is submitted.

When to Apply

Most departments and schools have deadlines in November and early December for the following fall quarter. Consult the Admissions section of the Graduate Division website for specific deadlines for each major. A few departments accept applications for winter and spring quarters. At the discretion of the department, applications may be considered if submitted after a program’s stated deadline, provided the enrollment limits have not been exceeded.

Entrance Requirements

U.S. applicants to graduate standing must hold a bachelor’s degree from a regionally accredited institution comparable in standard and content to that awarded at the University of California. Degrees granted on the basis, for example, of nonacademic prior learning, test scores, and other than organized supervised coursework in academic subjects are not considered comparable. A scholastic aver-
age of B or better (or its equivalent if the letter grade system is not used) is required in the last two years of undergraduate coursework and in any postbaccalaureate study.

Requirements for international applicants are listed below.

**Supporting Materials**

Supporting materials to be submitted, including official transcripts of record and the nonrefundable application fee, are specified at the graduate admissions website. Submitted materials become the property of the University and are not returnable.

**Graduate Record Examination**

Applicants for admission to a department or school that requires Graduate Record Examination (GRE) scores should arrange to take the examination no later than December so scores arrive on time. GRE scores should be sent directly to the prospective department and not to the Graduate Division.

GRE registration and information about both paper and computer-based testing are available from ETS. Information on GRE fee waivers is also available on the ETS website.

**Letters of Recommendation**

Most graduate professional schools, departments, and interdepartmental programs at UCLA require applicants to submit three letters of recommendation. Letters typically augment, validate, or explain information provided in the application and should be written by people qualified to analyze students' abilities and academic promise.

**Admission to the Schools of Dentistry, Law, and Medicine**

Applicants for MS and PhD programs in departments of the schools of medicine and dentistry should apply for admission to the Graduate Division as described above.

For admission to DDS, JD, LLM, SJD, and MD degree programs in the schools of dentistry, law, and medicine, applicants should consult school websites or write to the respective schools for information and application procedures.

**Admission to Graduate Programs in Bioscience**

Applicants to PhD programs in fields related to life and biomedical sciences apply for admission to the individual degree-granting program. **Graduate Programs in Bioscience** is a consortium of PhD programs organized into specialized research groups, called home areas, that serve as the admissions and training units associated with the degree-granting programs. Through this structure, students can specialize in their chosen area while maintaining the flexibility to move between home areas to best pursue their research interests.

**Degree-Granting Programs and Home Areas**

Consortium PhD programs offer the research home areas listed below.

- **Bioinformatics**
- **Human Genetics**
- **Genetics and Genomics**
- **Molecular Biology**
- **Biochemistry, Biophysics, and Structural Biology**
- **Cell and Developmental Biology**
- **Gene Regulation**
- **Immunity, Microbes, and Molecular Pathogenesis**
- **Molecular, Cellular, and Integrative Physiology**
- **Molecular and Medical Pharmacology**
- **Molecular Pharmacology: Diagnostics, Therapeutics, and the Biology of Disease**
- **Neuroscience**
- **Physics and Biology in Medicine**

Additional opportunities for doctoral study include Biochemistry, Molecular and Structural Biology in the College of Letters and Science, Oral Biology in the School of Dentistry, and Molecular Toxicology in the Fielding School of Public Health.

**International Applicants**

International applicants who have completed their postsecondary education outside the U.S. are expected to hold a degree, with above average scholarship, from a university or university-level institution. If their examinations have been graded Excellent, Very Good, Good, and Pass, applicants must have at least a Very Good general rating to qualify for admission. Applicants who hold a three-year Bologna degree may be considered for admission on the recommendation of the department, program, or professional school. Applicants who hold a three-year ordinary or pass degree—or who hold a professional diploma in accounting, business, librarianship, social work, physical education, health education, and so forth—or a four-year degree, diploma, or higher certificate from a technical, vocational, or postsecondary specialized school should...
not apply for graduate admission. Persons with memberships in professional associations such as an Institute of Chartered Accountants, Institute of Chartered Secretaries and Administrators, and so forth, do not qualify for graduate admission unless they also hold recognized university-level degrees or titles.

Students should submit official transcripts of record, in the original language and with an English translation certified by the institution, for all college and university work. The original of an academic record that cannot be replaced must not be sent; a properly certified copy should be sent instead. Specific information for applicants from a variety of educational systems is available on the international applicants web page.

Proficiency in English

Most international applicants to UCLA graduate school are required to submit scores from either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) examination. International students who hold a bachelor's or higher degree from a university located in the U.S. or in another country (e.g., Australia, Barbados, Canada, Ireland, Jamaica, New Zealand, United Kingdom) in which English is both the primary spoken language of daily life and the medium of instruction, or who have completed at least two years of full-time study at such an institution, are exempt from this requirement.

Applicants who are required to submit TOEFL or IELTS scores (i.e., do not belong to the exempted categories listed) may also be required to take the UCLA English as a Second Language Placement Examination (ESLPE) to determine potential coursework in academic writing. Incoming students who score at least 100 on the TOEFL iBT (Internet-based test) or at least 7.5 overall band score on the IELTS examination are exempt from the ESLPE requirement.

Students who are required to take the ESLPE must do so before or during their first term at UCLA. Failure to do so results in a hold on student records. Students may take the ESLPE once only. Unauthorized retakes of the examination result in an invalid examination score. Depending on ESLPE results, students may be required to complete one or more courses in the English as a Second Language (ESL) credit-bearing series, beginning in their first term in residence at UCLA. The courses must be passed with a grade of C or better if taken for a letter grade, or B or better if taken on an S/U basis. Taking required ESL courses may prolong students' time to degree. If students do not achieve a minimum score on the ESLPE, their admission is deferred until they have acquired the necessary proficiency in English.

Teaching Assistantships

Nonnative English-speaking international graduate students who plan to work as teaching assistants (TAs) and are required to take the Test of Oral Proficiency (TOP), which is administered by the Office of Instructional Development (OID). Those who hold a bachelor's or higher degree from a U.S. institution are exempt. Students who do not plan to work as teaching assistants do not need to take the TOP.

For students who receive a clear pass (7.1 or above) on the TOP, no coursework is required. Students who receive a marginal pass (between 6.4 and 7.0) are required to take an approved oral skills course either before or during their first term as teaching assistants. Students scoring 6.3 or below are not eligible to become teaching assistants and are encouraged to complete recommended ESL coursework before taking the TOP examination again.

No other oral examination is accepted. Entering graduate students who plan to work as teaching assistants in their first term at UCLA must arrive early enough to take the TOP before instruction begins. The examination schedule and other information about TOP are available on the OID TOP web page.

Special Admission Policies

No Degree Objective

UCLA has no special limited or unclassified categories of graduate admission. Under some circumstances, however, applicants may be admitted for coursework without a degree objective. For example, teachers with a master's degree who wish some refresher study, or international students on a year's stay in the U.S., may wish to apply in this manner. Requirements for admission are the same as those for degree programs, and the academic program must agree to accept the student for the no degree objective (NDO) status. All admissions to NDO status must be specially approved by the dean of the Graduate Division, as must any University financial assistance for students on NDO status.

Duplication of Degrees

The University of California, in general, discourages the duplication of advanced degrees. At the same time, it recognizes that a professional degree does not duplicate an academic one, and that pressing needs may exist for degrees in different areas (see Graduate Concurrent and Articulated Degree Programs in the Majors and Degrees chapter). Students who apply for a second academic degree at the same level or lower than the one they already hold are required to show compelling cause to the department. The Graduate Division is particularly concerned that a careful review and special justification be made by the graduate program in all cases where an applicant or continuing student is recommended for admission to a second doctoral program. This concern also extends to a recommendation for student support for pursuit of a second doctorate degree. All degree requirements and University regulations apply just as they do for a first degree. Courses and other degree requirements already applied to the earlier degree may not be applied to the second.

Summer Sessions Courses

Enrollment in summer sessions courses does not constitute admission to graduate standing, nor does it substitute for the required continuous registration in fall, winter,
and spring quarters. Students who wish to apply summer sessions courses to their subsequent graduate program should consult in advance with their departmental adviser. This is also true if they have been readmitted to graduate standing and wish to resume graduate study in summer sessions. Information and applications are available from Summer Sessions, 1331 Murphy Hall.

If students take summer sessions courses following the award of their bachelor’s degree, the grades do not appear on the undergraduate transcript (they are included on a separate transcript). After students are accepted by the Graduate Division, summer sessions grades are included on the graduate transcript and computed in the grade-point average.

Readmission
Students who have registered at any time as a graduate student at UCLA and return after an absence (except a formal leave of absence) must file an Application for Graduation Admission.

See the Academic Policies chapter of this catalog for readmission procedures.

REGISTRATION
Registrar’s Office
1113 Murphy Hall
310-825-1091, option 6
http://registrar.ucla.edu

Registration consists of paying fees and enrolling in classes.

1. Registration fees and other University charges are due the 20th of each month. BruinBill accounts can be viewed through MyUCLA.

2. Enrollment in classes is completed through MyUCLA. Students must complete both processes by the established deadlines to be officially registered and enrolled for the term.

Graduate students must be either registered and enrolled on an official leave of absence every term until their degrees are awarded. As an exception, certain graduate students may be eligible to pay the filing fee. Failure to register, have filing fee status, or be on an official leave of absence for any term (fall, winter, or spring quarter) constitutes withdrawal from UCLA.

Paying Fees
Details on fee payment, enrollment procedures, and deadlines are on the Registrar’s website.

E-bill
BruinBill accounts are administered electronically (e-bill) through MyUCLA. Financial activity is displayed for the current term, as well as account activity for the last 24 months. MyUCLA also provides a link to important communications from the University regarding registration and University policies. Students can pay their BruinBill account electronically using electronic checks with no fee, or American Express, Discover, MasterCard, and VISA credit cards with a fee.

Annual Graduate Fees
Although the exact cost of attending UCLA varies by program, there are some fees that all UCLA students must pay. Each entering and readmitted student is required to submit a Statement of Legal Residence and Statement of Intent to Register to the Graduate Division Diversity, Inclusion, and Admissions office. A student classified as a nonresident of California must pay annual nonresident supplemental tuition (NRST) in addition to other registration fees. Legal residents of California are not required to pay NRST. Annual graduate fees and NRST are published online. For more information about residence and nonresidence, see Appendix A.

Professional Degree Program Fees
Students admitted to the DDS, DEnv, DrPH, JD, MArch I, MFA in Art, MFA in Film and Television, MFA in Theater, MD, MPH, MPP, MSN, MSW, and MURP degree programs must also pay professional degree supplemental tuition (PDST), which varies by program. Professional degree supplemental tuition fees are published on the Registrar’s annual fees web page.

Self-Supporting Program Fees
Students in self-supporting programs pay one fee per year or program instead of per-term fees. For details, contact the individual program. Self-supporting program fees are published on the Registrar’s annual fees web page.

Miscellaneous Fees
Miscellaneous fees include charges for late registration fees payment. Late fees also apply if students file their study list late or do not pay off BruinBill balances on time. Fees are charged if any check is returned by a bank for any reason. Charges are assessed for most petitions and other special requests. There is also a fee for advancement to doctoral candidacy. Study list, document and service, transcript-related, and degree and diploma fees are published on the Registrar’s website.

Student Health Insurance Fee
All undergraduate students are automatically assessed for and enrolled in the University of California Student Health Insurance Plan (UCSHIP) as a condition of registration at UCLA. Continued enrollment in a qualified health insurance plan is mandatory during all registered terms. UCSHIP components are medical, vision, dental, and behavioral health services.

The UCSHIP fee is billed each term along with other UCLA fees. UCSHIP fulfills all requirements mandated for a qualified health insurance plan as defined by the University of California. The Ashe Student Health and Wellness Center is the primary health care provider for UCSHIP, and where all nonemergency medical care is initiated.

If students withdraw during a school term, they may continue to use the Ashe Center on a fee-for-service basis for
the remainder of the term, effective from the date of the withdrawal.

Waiving UCSHIP

Students may waive UCSHIP if they maintain active enrollment in a qualified health insurance plan that meets all established requirements, apply for a waiver within established deadlines each term, and correctly complete the online waiver form. Students are responsible for providing complete and accurate information. Third-party individuals may not waive UCSHIP for a student. Waivers must be submitted before the term fees payment deadline. Deadlines are strictly enforced, and no refunds are issued after the deadline. For more information, see the waiving UCSHIP web page.

Fee Refunds

Students who formally withdraw from the University or take an approved leave of absence may receive partial refunds of fees. For more information, see Withdrawal in the Academic Policies chapter of this catalog; or consult the Registrar’s refunds web page for policy details and specific refund deadlines for each term.

Fee Deferrals

Academic apprentice personnel are eligible to receive a fee deferral for registration fees assessed during the term in which they serve as an academic apprentice. For more information, students should contact their hiring department. Students are responsible for paying fees by the deferred payment deadline, which is two months after the standard term due date. Whether students attend UCLA, take a leave of absence, or withdraw from the University, they are responsible for the fees; but may be eligible to receive a partial fee refund according to the refund schedule. Fees not paid by the deadline are subject to late fees.

Reduced Nonresident Supplemental Tuition

The annual nonresident supplemental tuition (NRST) for graduate doctoral students who have advanced to candidacy is reduced by 100 percent, effective the term after the student is advanced. Doctoral students may receive this reduced nonresident supplemental tuition rate for a maximum of three years. After three years, the full nonresident rate is assessed.

Filing Fee

Graduate students may be eligible to pay the filing fee (half the quarterly student services fee) in lieu of full term registration fees for the filing fee usage period in which they expect to complete final degree requirements and receive their degree. Students are not eligible to pay the filing fee unless registered for the immediately preceding term. For more information on other eligibility requirements, see the filing fee web page.

In Absentia Registration

Graduate students conducting research or taking coursework outside California may be eligible for in absentia registration and reduction of tuition and the student services fee to 15 percent of the full amounts. See the Academic Policies chapter of this catalog for more information.

Annual Budget Estimates

Budgets are designed to serve as a guide and are subject to change without notice. Budget information is available from Financial Aid and Scholarships. Budgets for the schools of medicine, dentistry, and nursing are higher due to specialized supplies. More information can be found on the medical school, dental school, and nursing school websites for their respective students.

Enrolling in Classes

Students enroll in classes through MyUCLA during assigned times—called enrollment appointments—when they are allowed to enroll. The Class Planner feature allows students to create class plans prior to enrollment, share plans with counselors, and quickly add classes during their enrollment appointment. Students use the Find a Class or Section feature to search the Schedule of Classes and add available classes to their class plan or study list.

MyUCLA is also used to view enrollment appointments; drop classes; change grade type and number of units;
exchange classes; and view one’s study list, which includes information on class meeting times, final exams, classmates, grades, textbooks, and class websites. For more information, see the Registrar’s study list and enrollment policies web pages.

For classes that require written approval or specialized processing, students may enroll in person Monday through Friday from 9 a.m. to 4 p.m. at 1113 Murphy Hall.

Study List
A study list is the record of courses a student is enrolled in for the term. At 11:59 p.m. on Friday of the second week of instruction, the study list of enrolled courses becomes official and all wait lists are eliminated. Students should verify their study list through MyUCLA after each enrollment transaction. Students are responsible for all courses and the grading basis as listed on MyUCLA, and cannot receive credit for courses not listed.

After Friday of the second week, most changes to the official study list can be made with a fee through MyUCLA. Some changes require an Enrollment Petition along with approval signatures.

See the study list web page for deadlines and complete instructions.

Errors or omissions should be corrected before the College or school deadlines for changes by petition. Unapproved withdrawal from or neglect of a course entered on the study list results in a failing grade.

Wait List
Some departments establish wait lists for classes that are full. If an enrolled student drops the class, that seat is filled by a student on the wait list. Students can check enrollment status through MyUCLA. Position on a wait list does not indicate enrollment. Students on a wait list should not assume they will be added to a class.

Wait lists are maintained through Friday of the second week of instruction unless a department deletes them earlier.

Full-Time Graduate Program
Three courses (or 12 units) per term are considered the normal enrollment for graduate students and are required for students not in doctoral candidacy to be counted for full-time standing in University official enrollment records. Therefore, students are directed by their departments to enroll full time whenever possible.

Throughout their appointments, teaching assistants (TAs) and graduate student researchers (GSRs) are required to be registered and enrolled in at least 12 quarter units. TAs or GSRs terminate their appointments if they take a leave of absence, withdraw, or use a filing fee. Course 375 for TAs, and independent studies at the 500 level for GSRs, may be counted toward the 12-unit load.

Graduate students holding fellowships must be enrolled in at least 12 units, both before and after advancement to candidacy. The 12-unit minimum required per term may include, among others, the 500 series (individual study or research).

Veterans are required to make normal progress toward the degree as stated by the major department. Information on Department of Veterans Affairs regulations is available from the veterans benefits officer, 1113 Murphy Hall.

Continuous Registration Policy
Graduate students must be either registered and enrolled or on an official leave of absence every term until their degrees are awarded. As an exception, certain graduate students may be eligible to pay the filing fee. Failure to register, have filing fee status, or be on an official leave of absence for any term (fall, winter, or spring quarter) constitutes withdrawal from UCLA.

Registration in the Final Term
If students are completing courses; using faculty time, library facilities, laboratories, or other University resources; or receiving University funds, they are required to register in the final term in which they expect to receive their degree.

When the award of a degree is expected at the end of a given term, but special circumstances (not involving preparation of the manuscript) over which a student has no control prevent the completion of all requirements before the first day of instruction in the next term, a student may petition for a waiver of registration for that term. Such petitions must be accompanied by a letter from the graduate adviser or department chair elaborating the exceptional circumstances.

Health Assessment and Evaluation
New students enrolling in the schools of dentistry, medicine, or nursing, or the Social Welfare department, must complete and return health evaluation forms to the Arthur Ashe Student Health and Wellness Center. See the Ashe Center website to obtain professional school health clearances and monitor immunization compliance. For specific questions related to requirements, contact the individual department.

Immunization Requirements
UCLA requires that all incoming students be vaccinated against or show immunity to multiple infectious diseases consistent with guidelines of the American College Health...
FINANCIAL SUPPORT

Fellowships and Financial Services
1228 Murphy Hall
310-825-1025
uclafellowship@grad.ucla.edu
https://grad.ucla.edu/funding/financial-aid/

As a major center for graduate study, UCLA offers its qualified graduate students substantial support through several types of financial assistance.

Information on available funding for entering (and re-entering) students is included in the online Application for Graduate Admission. Continuing graduate students should complete the online fellowship application. Completed fellowship applications must be returned to the home department by the published deadlines. Some departments have earlier deadlines; see the Graduate Division continuing student funding web page for details.

The Graduate Division website includes a financial support section for entering students and one for continuing students. Both describe the full range of financial assistance available. Students should contact their department for more detailed information.

Fellowships

The University administers several awards on the basis of scholarly achievement. Most awards are available in open competition, though some are restricted to new students or to specific departments. Some fellowship and scholarship awards are made from University funds; others are made from endowment funds held in trust by the University and given by interested friends and alumni. Still others come from annual donations by educational foundations, industry, government, and individual benefactors.

Most fellowship, traineeship, and grant awards are for one academic year (three terms). Fellowships and grants provide stipends in varying amounts for qualified students. Nonresident tuition fellowships cover the nonresident supplemental tuition (NRST), for periods of one to three terms, of selected graduate students who are not California residents.

Assistantships

Academic apprenticeships train qualified students for careers in teaching and research, and compensate them for their services. Teaching assistantships provide experience in teaching undergraduates, with faculty supervision. Graduate student researcher appointments give students experience working on faculty-supervised research projects. For more information see the working at UCLA web page.

Awards Based on Financial Need

Because the cost of a graduate education may present a financial hardship, students who require assistance in meeting educational costs are encouraged to apply for aid based on their financial need. Need is defined as the difference between allowable school-related expenses and financial resources. Financial aid applicants must file the Free Application for Federal Student Aid (FAFSA) by priority filing deadline of March 2. Some awards, such as university grants, are subject to availability of funding. Students who complete the FAFSA by March 2 should also make sure that any additional requested documentation is submitted to Financial Aid and Scholarships as soon as possible.

Students who need financial aid for summer sessions must submit a Summer Aid Application in addition to the FAFSA. Summer applications are available on the Financial Aid website beginning April 1 and should be filed by April 30 for on-time consideration.

Financial aid is also available to UCLA students enrolled in summer travel, summer institutes, or UC cross-campus summer sessions. See the Financial Aid website.

Financial aid awards include work-study and low-interest loans. Students are usually awarded a financial aid package that is a combination of these forms of assistance. More information is available from Financial Aid and Scholarships, A129J Murphy Hall.

DEGREE REQUIREMENTS

The following information is for prospective applicants and those outside the University who are interested in the basic structure of UCLA graduate degree requirements. It is not meant to be comprehensive or to serve as a primary resource for continuing students. Official, specific degree requirements, including language requirements, are detailed in the Program Requirements for UCLA Graduate Degrees. Standards and Procedures for Graduate Study at UCLA publishes detailed information and sets forth general policies, many of which emanate from the Academic Senate and its Graduate Council, regarding completion of degree requirements, master’s and doctoral committees, examinations, and foreign language requirements. General regulations concerning graduate courses, standards of scholarship, disqualification, appeal, leave of absence, normal progress toward degree, withdrawal, and a number of other matters also are included.

Master’s and Doctoral Study

Graduate students earn a master’s or doctorate degree by distinguished achievement in advanced study and research. In addition to coursework, there are various means of evaluating achievement in study, including qualifying and comprehensive examinations and various kinds of laboratory and field work. Achievement in research is primarily assessed through evaluation of the master’s thesis or doctoral dissertation. In addition to advanced study and research, professional master’s and doctoral programs also may include professional training.
This training may take the form of fieldwork, internships, or projects, and may lead to professional licensure.

**University Minimum Standards**

The requirements described here for master's and doctoral degrees are minimum standards set by the University. Individual schools or departments may set higher standards and may require additional courses and examinations for their master's degrees. Each department also sets additional requirements for doctoral degrees according to the demands of the field of study. See Program Requirements for UCLA Graduate Degrees and the departmental graduate adviser for details. Policies and regulations are outlined in Standards and Procedures for Graduate Study at UCLA.

**Academic Residence**

For the master's degree, the minimum residence requirement consists of three academic terms of registration in graduate standing at the University of California, including at least two terms at UCLA.

For the doctorate degree, the minimum residence requirement is two years (six academic terms) of registration in graduate standing at the University of California, including one year (usually the second) in continuous residence at UCLA. If students earned a master's degree at UCLA, one year of this requirement will have been met. In most cases a longer period of residence is necessary, and from three to five years is generally considered optimal.

Academic residence for both degrees is established by successfully completing a minimum of one graduate or upper division course (4 units) during a term.

Students may earn one term of residence for summer study in either of these ways: enroll in two six-week summer sessions taking at least 2 units of upper division and/or graduate work in each session, or enroll in one eight-week session for at least 4 units of credit. Residence earned through summer sessions enrollment is limited to one third of the degree requirements.

To maintain satisfactory progress toward the degree, UCLA requires at least a B average in all courses taken in graduate standing at the University and in all courses applied toward a graduate degree, including those taken at another UC campus.

**Foreign Language Requirements**

Foreign language requirements are determined by individual departments and programs. If their program has a language requirement, students should fulfill it either before they begin graduate study or as soon as possible thereafter. All foreign language requirements must be satisfied before advancement to candidacy.

Many departments require graduate degree candidates to demonstrate proficiency in one or more foreign languages, so that they can acquire broad knowledge in their field of study and keep abreast of foreign developments in the field. Students are urged to complete language requirements as early as possible in their graduate career. If the department requires two or more foreign languages, students must complete at least one before the University Oral Qualifying Examination (unless, as is most common, the department requires that both be completed before the examination).

Some departments allow students to fulfill language requirements either by passing departmental examinations or by completing coursework in a foreign language. Certain departments may require additional languages, special competence, or other special procedures. In some departments, English satisfies the foreign language requirement if it is not the native language.

For more details on foreign language requirements, see the Program Requirements for UCLA Graduate Degrees.

**Changing Majors**

Continuing graduate students may petition for a change of major after discussing plans with the new department. The major/classification change petition is filed with Academic Services, 1255 Murphy Hall. While there is no deadline for this petition, it should be submitted before the end of the tenth week of instruction for changes in the current quarter. Students should contact their department about any deadlines before completing the petition.

**Program of Study and Scholarship**

**Master’s Degree**

At least nine graduate and upper division courses (or any number of fractional courses totaling 36 units) must be completed in graduate standing; at least five of the nine (20 units) must be graduate-level courses. These unit requirements represent the University minimum standard. Many master’s degree programs have higher unit requirements.

UCLA offers master’s degrees under two plans: Plan I, the Master's Thesis; and Plan II, the Master's Capstone. Some departments offer both plans, and students must consult with their department to determine the plan for meeting their degree requirements. University minimum requirements are the same under either plan.

**Plan I: Master's Thesis**

Every master’s degree thesis plan requires the completion of an approved thesis that demonstrates the student’s ability to perform original, independent research.

**Plan II: Master's Capstone**

Following advancement to candidacy, students under Plan II must pass an individual or group capstone project or comprehensive examination. Information concerning this project or examination and its format (which may be a recital, exhibition, project portfolio, etc.) is available from the department.

**Doctorate Degree**

Doctoral programs are individualized and permit a high degree of specialization. The University does not specify course requirements for doctoral programs. Individual programs set their own requirements, which may include specific courses, and these must be completed before stu-
Students take the University Oral Qualifying Examination. Students determine their course of study in consultation with a graduate adviser until the doctoral committee is appointed.

**Doctoral Examinations before Advancement to Candidacy**

Prior to advancement to candidacy, doctoral candidates fulfill the coursework, teaching, and/or examinations required by the major department or program. They are supervised during this period by a departmental adviser and/or departmental guidance committee. This committee administers a departmental written and, in some cases, oral examination (not to be confused with the University Oral Qualifying Examination) after students complete the recommended or required work. Once all departmental requirements are met, the department chair consults with the student and then nominates a doctoral committee. All students are required to successfully complete a written qualifying examination and the University Oral Qualifying Examination before advancement to doctoral candidacy.

**University Oral Qualifying Examination**

The doctoral committee, consisting of at least four faculty members nominated by the department, is appointed by the dean of the Graduate Division (consult *Standards and Procedures for Graduate Study at UCLA* for details on committee membership). To determine qualifications for advancement to candidacy, the committee administers the University Oral Qualifying Examination and, at its option, a separate written examination.

**Doctoral Dissertation**

Every doctorate degree program requires the completion of an approved dissertation that demonstrates the student's ability to perform original, independent research and constitutes a distinct contribution to knowledge in the principal field of study.
Academic Policies

Students at UCLA are responsible for understanding the policies and regulations established by the Academic Senate. Should any variations exist between explanations in this catalog and regulations in the Manual of the Academic Senate, the manual prevails in all cases.

ACADEMIC TERMS

Undergraduate programs and most graduate programs at UCLA use the quarter system for academic terms, credit units, and registration fees. An academic quarter term is 10 weeks of instruction, and there are 146 days of instruction in an academic year. Class credit is accumulated in quarter units (see below). Registration fees are due each quarter. For details on academic dates and deadlines, see the Registrar’s term calendar. For fees, see the fee tables.

The School of Law and Geffen School of Medicine use the semester system.

LANGUAGE OF INSTRUCTION

Courses at UCLA are taught in the English language, unless otherwise noted in the course description (for example, foreign language courses).

ACADEMIC CREDIT

Academic work at UCLA is measured by units of credit, which are used to evaluate the amount of time a student has devoted to a particular subject and to determine a student’s class level.

Units of Credit

Most UCLA courses are assigned a unit value. One unit represents three hours of work per week per term by the student, including both class attendance and preparation.

Class Levels

Undergraduate

Undergraduate class level is based on completed and in-progress units, not years attended.

<table>
<thead>
<tr>
<th>UNDERGRADUATE LEVELS</th>
<th>Class Designation</th>
<th>Units Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman (UFR)</td>
<td>0–44.9</td>
<td></td>
</tr>
<tr>
<td>Sophomore (USO)</td>
<td>45–89.9</td>
<td></td>
</tr>
</tbody>
</table>

Graduate Student

Graduate class level is based on the degree objective, whether or not students are advanced to candidacy for a doctorate, and/or completed units.

<table>
<thead>
<tr>
<th>GRADUATE LEVELS</th>
<th>Class Designation</th>
<th>Units Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master (MA/MS)</td>
<td>Master’s degree objective</td>
<td></td>
</tr>
<tr>
<td>Professional Master (GPM)</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Doctorate 1 (GD1)</td>
<td>Not advanced to candidacy</td>
<td></td>
</tr>
<tr>
<td>Doctorate 2 (GD2)</td>
<td>Advanced to candidacy</td>
<td></td>
</tr>
<tr>
<td>Professional School (PF)</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Professional School (PF2)</td>
<td>Second year (Law: 30-55.9)</td>
<td></td>
</tr>
<tr>
<td>Professional School (PF3)</td>
<td>Third year (Law: 56 or more)</td>
<td></td>
</tr>
</tbody>
</table>

Repetition of Courses

Certain courses, as noted in their course descriptions, may be repeated for credit. Other courses taken at UCLA (except UCLA Extension) may be repeated only according to the following guidelines:

1. To improve the grade-point average (GPA), students may repeat only those courses in which they receive a grade of C– or lower; NP or U grades may be repeated to gain unit credit. Courses in which a letter grade is received may not be repeated on a P/NP or S/U basis. Courses originally taken on a P/NP or S/U basis may be repeated on the same basis or for a letter grade.

2. Repetition of a course more than once requires the approval of the College, school, or dean of the Graduate Division, and is granted only under extraordinary circumstances.

3. Degree credit for a course is given only once, but the grade assigned each time the course is taken is permanently recorded on the transcript.

4. For undergraduates who repeat a total of 16 units or less, only the most recently earned letter grades and grade points are computed in the GPA. After repeating
16 units, however, the GPA is based on all letter grades assigned and total units attempted.
5. Certain programs may place additional restrictions on the repetition of courses required for those programs.
6. For graduate students, all courses in which a letter grade is given, including repeated courses, are used in computing the GPA.

Credit for Upper-Division Tutorials
Credit for upper-division tutorial courses numbered 195 through 199 in a single term is limited to a maximum of 8 units. Subject to regulations governing P/NP grades, students may take these courses on a P/NP or a letter-grade basis, but the total number of units allowed in upper division tutorial courses for a letter grade is 32.

To enroll in an upper division tutorial course, students must have advanced junior standing and at least a 3.0 GPA in the major field, or must have senior standing. Students who have an outstanding Incomplete (I) grade in an upper division tutorial course may not enroll in another upper division tutorial course until the grade of I has been removed. On the advice of the instructor and chair, the dean of the College or school may authorize exceptions to the limitations listed. Departments may impose additional limitations on upper-division tutorial courses.

Credit by Examination
Students with high scholastic standing may earn credit for regular UCLA courses by taking examinations rather than enrolling in the courses. This is accomplished by establishing, with a UCLA faculty member, an individual plan of study that may include oral and written work in addition to other requirements. To be eligible, undergraduate students must have completed a minimum of 12 units at UCLA. Graduate students must be registered at the time of the examination and are limited to a maximum of three courses taken in this manner.

The results of these courses are entered on the record in the same way as University of California transfer credit, and grade points are assigned. Graduate credit earned by examination may be applied to minimum course requirements for master’s degrees but cannot apply to academic residence requirements for master’s or doctorate degrees. Students need approval from the instructor, the department, and the College, school, or dean of the Graduate Division, from whom petitions for credit by examination (with fee) are available.

GRADES
The work of all students at UCLA is reported in grades. Instructors are required to assign a final grade for each student registered in a course.

Undergraduate Grades
The following grades are used to report the quality of undergraduate student work at UCLA:
A+ Extraordinary
A Superior
B Good
C Fair
D Poor
F Fail
P Passed (achievement at grade C level or better)
NP Not Passed
I Incomplete
IP In Progress
DR Deferred Report

Grades A, B, C, and D may be modified by a plus (+) or minus (–) suffix. Grades A, B, C, and P denote satisfactory progress toward the degree. A grade of D may be applied toward degrees unless otherwise prohibited by program requirements. However, courses in which a grade of D is received must be offset by higher grades in the same term for students to remain in good academic standing. A grade of F yields no unit or course credit.

Graduate Grades
The following grades are used to report the quality of graduate student work at UCLA:
A Superior Achievement
B Satisfactorily demonstrated potentiality for professional achievement in field of study
C Passed the course but did not do work indicative of potentiality for professional achievement in field of study
F Fail
S Satisfactory (achievement at grade B level or better)
U Unsatisfactory
I Incomplete
IP In Progress
DR Deferred Report

The grades A, B, and C may be modified by a plus (+) or minus (–) suffix. The grades A, B, and S denote satisfactory progress toward the degree. A grade of C may be applied toward graduate degrees unless otherwise prohibited by the program requirements. However, courses in which a
grade of C is received must be offset by higher grades in the same term for students to remain in good academic standing. A grade of F yields no unit or course credit.

The schools of dentistry, law, and medicine use their own grading codes. Students interested in dentistry, law, or medicine programs should contact the appropriate school for more information.

**Grade Points**

Grade points per unit are assigned by the Registrar as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Grade Points</th>
<th>Grade</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>4.0</td>
<td>C–</td>
<td>1.7</td>
</tr>
<tr>
<td>A</td>
<td>4.0</td>
<td>D+</td>
<td>1.3</td>
</tr>
<tr>
<td>A–</td>
<td>3.7</td>
<td>D</td>
<td>1.0</td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
<td>D–</td>
<td>0.7</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
<td>F</td>
<td>0.0</td>
</tr>
<tr>
<td>B–</td>
<td>2.7</td>
<td>NP</td>
<td>0.0</td>
</tr>
<tr>
<td>C+</td>
<td>2.3</td>
<td>U</td>
<td>0.0</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As indicated, a plus (+) or minus (–) suffix added to a grade raises or lowers the grade-point value, except in the case of A+, which carries the same number of grade points as the A grade. Courses in which students receive a grade of P or S may count toward satisfaction of degree requirements, but these grades, as well as DR, I, IP, and NR, are disregarded in determining the grade-point average. (If a grade of I is later removed and a letter grade assigned, units and grade points are included in subsequent GPAs.) NR indicates that no grade was received from the instructor.

**Grade-Point Average**

The grade-point average is determined by dividing the number of grade points earned by the number of units attempted. The total grade points earned for a course equals the number of grade points assigned times the number of course units. For example, if a student takes three four-unit courses and receives grades of A–, B–, and C+, then the GPA for the term equals the total grade points (34.8) divided by the total course units (12). The GPA is 2.9. For satisfactory standing, undergraduate students must maintain a C average (2.0 GPA) and graduate students a B average (3.0 GPA) in all courses taken at any campus of the University (except UCLA Extension).

Only grades earned in regular session or summer sessions at any UC campus—and grades earned by Arts and Architecture, Letters and Science, and Music undergraduate students in UCLA Extension courses prefixed by XLC—are computed in the UCLA grade-point average. Grades earned at another institution or in UCLA Extension courses other than those prefixed by XLC do not affect the GPA.

Other schools and agencies may calculate GPAs differently from the University when evaluating records for admission to graduate and professional school programs. Students should contact those entities about such policies.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Grade Points</th>
<th>Course Units</th>
<th>Total Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A–</td>
<td>3.7</td>
<td>4</td>
<td>14.8</td>
</tr>
<tr>
<td>B–</td>
<td>2.7</td>
<td>4</td>
<td>10.8</td>
</tr>
<tr>
<td>C+</td>
<td>2.3</td>
<td>4</td>
<td>9.2</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td></td>
<td>34.8</td>
</tr>
</tbody>
</table>

**Passed/Not Passed Grades**

Undergraduate students in good standing who are enrolled in at least 12 units (14 in the Henry Samueli School of Engineering and Applied Science) may take certain courses on a Passed/Not Passed (P/NP) basis.

The grade P is assigned for a letter grade of C or better. Units earned this way count toward degree requirements but do not affect the GPA. Students receive neither units nor course credit for a grade of NP.

Students may enroll in one course each term on a P/NP basis (two courses if they have not elected the P/NP option in the preceding term). Their department or school may require that they take some or all courses in their major for a letter grade. Certain other courses or programs may also be exempt from the P/NP option; contact the College or school for details.

Students may make program changes to or from P/NP grading through the sixth week of instruction through MyUCLA.

**Satisfactory/Unsatisfactory Grades**

Graduate students in good standing (minimum 3.0 GPA) may enroll for Satisfactory/Unsatisfactory (S/U) grading in one graduate or upper-division course outside the major field each term, in addition to any courses offered only on an S/U grading basis within the major. The grade S is assigned for a letter grade of B or better, but units earned in this manner are not counted in computing the GPA. Students receive neither units nor degree credit for a grade of U. They may not elect the S/U option for summer sessions courses without an approved petition.

Courses taken on an S/U basis outside the major, and 500-series courses within the major, are applicable toward degree and/or academic residency requirements if so approved. Interdepartmental majors may not apply S/U courses to degree requirements, except for 500-series courses. Program changes to or from S/U grading may be made through the tenth week of instruction through MyUCLA.

**Incomplete Grades**

Once a grade of Incomplete (I) is assigned, it remains on the transcript along with the passing grade students may later receive for the course. The instructor may assign the grade I when work is of passing quality but is incomplete for a good cause (such as illness or other serious problem). It is the student’s responsibility to discuss with the
instructor the possibility of receiving an Incomplete as opposed to a nonpassing grade.

If a grade of I is assigned, students may receive unit credit and grade points by satisfactorily completing the coursework as specified by the instructor. Students should not re-enroll in the course; if they do, it is recorded twice on the transcript. If the work is not completed by the end of the next full term in residence, the I lapses to an F, NP, or U as appropriate. For undergraduate students, the College or school may extend the deadline in unusual cases.

In Progress Grades

For certain courses extending over more than one term, evaluation of student performance is deferred until the end of the final term of the course. Provisional grades of In Progress (IP) are assigned in the intervening term(s) and are replaced with the final grade when students complete the full sequence. The College or school faculty, or the Graduate Division, determines credit if students do not complete the full sequence and petition for partial credit.

Deferred Report Grades

Students may receive a grade of Deferred Report (DR) when the instructor believes their work to be complete but cannot assign a grade because of disciplinary proceedings or other problems. If students are given a grade of DR, the Office of the Dean of Students assists them in resolving the problem. For graduate students, the dean of the Graduate Division sets a deadline by which the DR lapses to an F if the problem is not resolved and a grade assigned. The DR is changed to a grade, or perhaps to an Incomplete, when the instructor provides written confirmation that the situation is resolved. The DR is not included in determining the grade-point average.

Correction of Grades

All grades except DR, I, and IP are final when filed by the instructor in the end-of-term course report. Thereafter, a grade change may be made only in case of a clerical or procedural error or other unusual circumstances. No grade may be revised by re-examination or, with the exception of grades of I and IP, by completing additional work. Students who are dissatisfied with a grade should review their work with the instructor and receive an explanation of the grade assigned. All grade changes are recorded on the transcript. See Appendix A for more details and procedures for appealing grades.

ABSENCE AND READMISSION

To be registered for a term, students must enroll in courses and pay fees according to deadlines specified in the Registrar’s Office term calendar. Students who do not register are subject to the following policies on absence and readmission.

Students who register and subsequently discontinue coursework or stop payment on registration fees checks—without an approved petition for withdrawal, leave of absence, or cancellation—receive grades of F, NP, or U, as appropriate, for all courses in which they are enrolled for that term. A fine is assessed if any check for registration fees payment is returned by a bank for stopped payment, insufficient funds, or any other reason. No fees are refunded, and future registration privileges may be curtailed or revoked.

Cancellation

Before the first day of classes, students may cancel registration by completing and submitting a Cancellation of Registration form, or faxing written notice to 310-206-4520. Refund is as follows: fees paid by new undergraduate and Dentistry students are refunded except for the nonrefundable acceptance of admission fee; for new graduate, undergraduate, continuing, and re-entering students, a service fee is deducted from the amount of fees paid.

Graduate students who cancel their registration and do not apply for a formal leave of absence must file for readmission to return to the University.

Withdrawal

Withdrawing from UCLA means discontinuing attendance in all courses in which students are enrolled. Students who withdraw during a term must file a Withdrawal Notice.

When students officially withdraw, a percentage of the term fees may be refunded depending on the date the withdrawal form is filed. Refer to the Registrar’s withdrawal web page for policy details and specific refund dates.

The UCSHIP fee is nonrefundable in most cases. Contact the Arthur Ashe Student Health and Wellness Center insurance office for more information.

Students may withdraw only if they have not taken any final examinations or otherwise completed the work in any classes. For undergraduates, one withdrawal places no restriction on readmission or continuation if they started
the term in good academic standing. If they withdraw after one or more previous withdrawals or while in academic difficulty, a restriction may be placed on their continuance in undergraduate standing. Before withdrawing, they are urged to consult faculty, department, or College or school advisers to consider the full implications of this action.

Undergraduates may also withdraw from a term retroactively, provided no final examinations have been taken and no coursework has been completed. No withdrawals are accepted once they have officially graduated from the University.

One-Term Absence

Students who complete a term (fall, winter, or spring quarter) and do not register the subsequent term as a continuing student and be eligible to register and enroll in advance.

Students on a one-term absence who plan to attend another institution—including UCLA Extension—should discuss plans with their College or school counselor before enrolling elsewhere. On returning to UCLA, students must have an official transcript mailed from the institution directly to UCLA Undergraduate Admission to have coursework evaluated.

Planned Academic Leave (PAL) for International Travel

Students who plan to participate in a study-abroad program sponsored by an institution other than UC are required to take a planned academic leave of absence (PAL) from UCLA. After they are accepted into a program, students must register their program with the UCLA International Education Office (IEO), B300 Murphy Hall. Registering the program also generates the student application for the leave of absence.

Requirements for programs and registration can be found on the IEO non-UC programs website.

Students returning from an approved PAL for participation in a registered non-UC study abroad program are not required to seek readmission, but must provide official transcripts for coursework evaluation.

Undergraduate Readmission

To return to the University after an absence of more than one term, students—except for those on PAL for non-UC study abroad—must complete an Undergraduate Readmission Application and file it with the Registrar’s Office in accordance with published deadlines. A nonrefundable fee applies.

Students must submit official transcripts from all institutions (including UCLA Extension) and a completed Statement of Legal Residence with readmission applications. Coursework is evaluated when official transcripts are received. The paper records of nonregistered students, including transcripts submitted for transfer credit, are retained by the Registrar’s Office for five academic years after the last registered term.

Students who have not registered for five years must resubmit official transcripts of all work completed outside UCLA. Readmission is generally approved if students were in good academic standing (2.0 grade-point average) when they left the University, if coursework completed elsewhere in the interim is satisfactory, and if readmission applications are filed on time. The College or school may have other regulations. Contact the readmission clerk for more information at 310-825-1091, option 6.

Readmission Deadlines

Fall Quarter August 15
Winter Quarter November 25
Spring Quarter February 25

Graduate Student Continuous Registration Policy

Graduate students must be either registered and enrolled or on an official leave of absence every term until their degrees are awarded. As an exception, certain graduate students may be eligible to pay the filing fee. Failure to register, have filing fee status, or be on an official leave of absence for any term (fall, winter, or spring quarter) constitutes withdrawal from UCLA.

Graduate Leave of Absence

Continuing graduate students in good standing (3.0 GPA or above) who have completed at least one term of UCLA graduate work may, with the support of their department and approval of the Graduate Division, be eligible for leaves of absence. Graduate students are allowed three quarters of official leave of absence.

Federal policy governing students on F-1 and J-1 visas restricts leaves of absence to certain conditions. Therefore, the Dashew Center for International Students and Scholars, in consultation with the Graduate Division, individually evaluates each international graduate student request for a leave of absence to determine that it meets federal (and University) eligibility criteria.

Students on approved leave of absence are not permitted to use faculty time or make use of University facilities for more than 12 hours since their last registration, and are not eligible for apprentice personnel employment or other services normally available to registered students. There is no need to apply for readmission, since the approved leave is for readmission to a specific term. The Registrar’s Office notifies students about registration for the returning term.

The Leave of Absence Request is available online. See the Registrar’s Office calendar for the filing deadline.

Research doctoral students who are new parents or who are confronted with extraordinary parenting demands should consult Standards and Procedures for Graduate Study at UCLA in regard to Graduate Council policy requiring program accommodations for them.
In Absentia Registration

Academic and professional graduate students conducting research related to their degree program outside California may be eligible for in absentia registration. Students registered in absentia pay 15 percent of Tuition and the Student Services Fee, but pay the full amounts of other mandatory fees such as health insurance and nonresident supplemental tuition (if applicable). In absentia registration and fee reductions may be used for a maximum of six quarters or four semesters for academic doctoral students, and up to three quarters or two semesters for master’s and professional graduate students. The In Absentia Registration Petition is available online. Complete details and restrictions are included.

Graduate Student Readmission

Students who are granted a formal leave of absence do not have to apply for readmission if they resume their graduate work in accordance with the terms of their leaves. All other continuing graduate students who fail to register for any regular session, or who fail to complete a term through cancellation or withdrawal, must apply for readmission.

Students who have registered at any time as a graduate student at UCLA and are returning after an absence (except a formal leave of absence) must file an Application for Graduate Admission, available online. Payment of the nonrefundable application fee may be made by credit card only. Transcripts of all academic work completed since registration at UCLA as a graduate student must also be submitted.

TRANSCRIPTS AND RECORDS

The transcript is the complete record of a student’s academic work at UCLA. The Registrar prepares, maintains, and permanently retains this record. Additional records may include financial and personal student information.

Transcripts

The transcript reflects all undergraduate and graduate work completed in UCLA regular and summer sessions. It lists chronologically courses, units, grades, cumulative GPA, transfer credits, and total units.

Official UCLA paper transcripts are printed on security paper to safeguard against unauthorized duplication, alteration, and misrepresentation. The paper has a multi-color security background design and a border with the words University of California, Los Angeles. Authentication details are located in the lower right-hand corner of the transcript, and the transcript legend is located on the reverse of the document. Transcripts are issued in blue envelopes marked Official Transcripts Enclosed.

Official UCLA electronic PDF transcripts contain a background design, identifying border text, authentication details, and legend. The secure file is sent with a cover page that includes UCLA, student, and recipient information. Two types of official UCLA transcript—academic and verification—are designed to meet specific needs. Both can be ordered through MyUCLA, as can an unofficial (student copy) academic transcript.

Academic Transcript

The academic transcript is a student’s complete academic record, including a listing of courses taken, transfer credit, units, grades, grade-point average (GPA), earned UCLA degrees, and in-progress term information. In-progress information includes a list of the courses that a student enrolled in during the term the document was requested and other in-progress information such as a change in major or the removal of an I grade.

Grades for completed terms are processed immediately following the conclusion of final examinations. Complete academic transcripts are available approximately two weeks after the last day of the term. For graduating students, academic transcripts with the graduation date included are available approximately six weeks after the end of the term. Students who require earlier proof of graduation should contact a degree auditor at 1113 Murphy Hall.

The minimum period required for processing and issuing academic transcripts for both registered and former students is three working days.

For auto insurance good-student discount, an academic transcript can be attached to the insurance form, or the form may be presented at 1113 Murphy Hall.
Verification Transcript
The verification transcript certifies registration (fee payment), enrollment status, and degrees. Verification transcripts confirm student status only after registration fees have been paid for the term. Verification of student workload is based on actual enrolled units and does not consider wait-list units, or list courses for a term.

Verification of degree can be issued after the degree has been posted to the student’s record, approximately six weeks after the term ends. If verification is required before the degree is posted, the student may contact a degree auditor at 1113 Murphy Hall.

Third-Party Verifications
UCLA has authorized National Student Clearinghouse to act as its agent for all third-party verifications of student enrollment and degrees, including those for loans and creditors. Approved by the U.S. Department of Education, the Clearinghouse is a national organization that facilitates and expedites student enrollment verifications for creditors and other student service-related agencies. The Clearinghouse abides by all provisions of the Family Educational Rights and Privacy Act (FERPA). Degree verification for the most recent term is available approximately seven weeks after the term ends.

Ordering Transcripts
Continuing students must order official academic and verification transcripts through MyUCLA. Other students may order transcripts through MyUCLA, in person at 1113 Murphy Hall, or by using a Transcript Order form.

Requests are not processed if students have outstanding financial, academic, or administrative obligations (holds) to the University. Transcripts of work completed elsewhere must be requested directly from the campus or institution concerned.

More information on ordering transcripts is available by calling 310-825-1091 or by sending e-mail.

For UCLA Extension courses, order transcripts from UCLA Extension, P.O. Box 24901, Department K, Los Angeles, CA 90024-0901 or online.

Fees and Payment
Most academic and verification transcripts are available at no charge after payment of the Document Fee.

A fee may be charged for some transcript-related services. For example, forms that must be completed by the Registrar’s Office and envelopes that require official signatures are charged a special handling fee. Expedited service—processing within 24 hours (paper) or 30 minutes (PDF)—is available for an additional fee, or transcripts can be faxed for an additional fee. Faxed transcripts are generally not considered official, and confidentiality cannot be guaranteed.

Transcript requests are not processed for anyone with outstanding obligations to the University. For exact fees, see transcript-related fees.

Student Records
Student files of pertinent documents are maintained for up to five years from the admit term. Students may view their records at the Registrar’s Office, 1113 Murphy Hall. Five days’ advance notice is required for viewing.

MyUCLA
Through MyUCLA, students acquire academic, financial, and personal information from their UCLA academic records.

Change of Name or Address
Students who wish to change their legal name on official University records should complete a Legal Name Change or Correction form and submit it with documentation supporting the name change to the Registrar’s Office, 1113 Murphy Hall. Students on an F or J visa must provide a current passport bearing the exact same name as the new name. All name changes are recorded on the transcript.

Student changes of address should be updated through MyUCLA.

Closure of Student Records
Student records are closed to revisions in enrollment, grading, and academic actions on award of a degree. Students are responsible for requesting review of their record prior to award of their degree. See UCLA Procedure 220.1 Student Grievances Regarding Challenge to Content of Student Records Under the Family Educational Rights and Privacy Act.

Changes requested by an individual after award of a degree are considered by the College or school only under extraordinary circumstances. Supportive documentation is required. On action of the academic dean, a statement of the request for revision and a note of the change will be recorded only in the memoranda section of the transcript.

DEGREES
Students must satisfy University requirements, College or school requirements, and department requirements as described in this catalog.

Undergraduate Degrees
Undergraduate degree requirements are subject to the following degree policies.

Student Responsibility
It is the responsibility of students to keep informed of and to comply with the rules, regulations, and policies affecting their academic standing. Meeting academic deadlines, monitoring the study list for accuracy, completing requirements, and fulfilling degree requirements are all part of their academic duties as students.

Minimum Scholarship
The grades A through C and Passed (P) denote satisfactory progress toward the bachelor's degree. The grades C–
through D– yield unit credit but may not satisfy certain scholarship requirements. Even when they do, they must be offset by grades of C+ or better in other courses. Students must earn at least a C (2.0) average in all courses taken at any University of California campus. Students who fail to maintain this level may be placed on academic probation or may become subject to dismissal. The College and each school may set additional scholarship requirements.

Academic Probation
Students are placed on probation if their overall or term grade-point average falls between 1.5 and 1.99. While they are on probation, they may not take any course on a Passed/Not Passed (P/NP) basis. Probation ends at the close of a regular term if students have attained a C (2.0) average for the term and a cumulative C average in all University work. Students who do not end probation within two terms are subject to dismissal.

Academic Dismissal
Students are subject to dismissal from UCLA under any of the following conditions:
- Their grade-point average in any one term is less than 1.5, or
- They do not earn at least a C (2.0) average in any term when they are on probation, or
- They do not end probation within two terms
If students are subject to dismissal, their transcripts carry that notation. They should make an appointment with their College or school counselor. Depending on the situation, they are given conditions for continuation or are dismissed from the University.

Progress toward the Degree
UCLA is a full-time institution, and it is expected that students complete their undergraduate degree requirements promptly. Normal progress toward graduation in four years is defined as the completion of 45 units per year, or 15 units per term.

Minimum Progress and Expected Cumulative Progress
The College and each school enforces minimum progress regulations. The College also enforces expected cumulative progress regulations. Students may be subject to disqualification for failing to meet minimum progress and expected cumulative progress requirements. See the College and Schools chapter for specific minimum progress and expected cumulative progress and study list regulations.

Petitions
A petition is a form submitted to explain an exception from any standard rule or regulation of the University. It is the only way to obtain formal approval from the department, the College or school, the Registrar, or office with authority over the particular request. Some petitions require a fee.

Some uses of petitions are to change the College, school, or major; take more or fewer units than regulations permit; make changes to the study list after MyUCLA processing ends; or obtain credit by examination. In addition, students may petition for concurrent enrollment, double major, or waiver of scholarship requirements.

Transfer Credit
Every California community college has transfer course agreements that specify which courses will receive transfer credit. These courses are displayed on ASSIST, the statewide transfer information website. Students can get some knowledge of transfer credit from accredited institutions other than the University of California or California community college by comparing the descriptions of courses taken with those in the UCLA General Catalog.

Once students complete the courses, they must have the other institution send official, sealed transcripts to UCLA Undergraduate Admission, 1147 Murphy Hall, Box 951436, Los Angeles, CA 90095-1436. Transfer students should discuss transfer credit with their College or school counselor and/or department adviser.

Community College/Lower Division Transfer Limitation
Effective for students admitted fall 2017 and later, after completing 105 lower-division quarter units toward the degree in all institutions attended, students are allowed no further unit credit for courses completed at a community college or for lower-division courses completed at any institution outside of the University of California. The University of California does not grant transfer credit for community college or lower-division courses beyond 105 quarter units, but students may still receive subject credit for this coursework to satisfy lower-division requirements. Units earned through Advanced Placement (AP), International Baccalaureate (IB), and/or A-Level examinations are not included in the limitation. Units earned at any UC campus (through extension, summer, cross-campus, UCEAP, Intercampus Visitor Program, and regular academic year enrollment) are not included in the limitation. To convert semester units into quarter units, multiply the
semester units by 1.5; for example, 12 semester units x 1.5 = 18 quarter units. To convert quarter units into semester units, multiply the quarter units by .666; for example, 12 quarter units x .666 = 7.99 or 8 semester units.

**Summer Sessions**

Summer sessions grades at any UC campus are computed in the UCLA grade-point average.

**UCLA Extension**

Students who wish to receive degree credit for work taken through UCLA Extension should take courses that correspond in number to the undergraduate courses offered in regular session. The designation XL or XLC before the number of the Extension course signifies that the course is equivalent to the regular session course bearing the same number. Grades earned by undergraduate students in the College of Letters and Science, the School of Arts and Architecture, and the Herb Alpert School of Music in courses prefixed by XLC are computed in the UCLA grade-point average. No degree credit is given for courses numbered X300 through X499. Concurrent enrollment in Extension and regular session is not permitted.

**Degree Checks**

Anytime prior to graduation, students may request a review of degree progress. These official degree checks detail requirements remaining to complete the bachelor’s degree. The degree check process may be different for the College and each school. The Degree Audit is a computer-generated assessment of all degree requirements and the courses taken to fulfill them. The Degree Audit may be viewed and printed through MyUCLA, or may be ordered at a College or school counseling office.

**College of Letters and Science**

Degree Audits are available through MyUCLA and on request from a College advising office (Academic Advancement Program, 1205 Campbell Hall; Honors Programs, A311 Murphy Hall; College Academic Counseling, A316 Murphy Hall). Students should review their Degree Audit with department undergraduate advisers and College advisers to ensure that all requirements will be satisfied.

**School of the Arts and Architecture**

Degree Audits are available through MyUCLA and on request from the Office of Student Services, 2200 Broad Art Center. Students should consult a department Student Services adviser when they have questions about degree requirements. Specific questions regarding major requirements should be referred to the department counselor.

**Henry Samueli School of Engineering and Applied Science**

Degree Audits are available through MyUCLA for students who entered fall quarter 2012 and later. Students who entered prior to fall quarter 2012 use the HSSEAS Degree Audit Reporting System (DARS) to determine which degree requirements are left to complete. Students should obtain an official degree check at least one term prior to their graduation term, and can make an appointment to see their academic counselor at 6426 Boelter Hall. For details, see the HSSEAS undergraduate degree audit website.

**Herb Alpert School of Music**

Degree Audits are available through MyUCLA and on request from the Office of Student Services and Enrollment Management, 1642 Schoenberg Music Building. Students should consult an adviser in this office when they have questions about department, school, or UCLA degree requirements.

**School of Nursing**

Degree Audits are available through MyUCLA for students who entered fall quarter 2012 and later. Students who entered prior to fall quarter 2012 may request their most recent degree check from the undergraduate student affairs adviser in 2-147 Factor Building.

**School of Theater, Film, and Television**

Degree Audits are available through MyUCLA for students who entered fall quarter 2012 and later. Students who entered prior to fall quarter 2012 should make an appointment with their department counselor in the Student Services Office, 103 East Melnitz Building. Students entering as freshmen receive a written degree check on achieving junior standing; those entering as juniors receive a degree check on entry. Students may initiate or request an updated degree check by making an appointment with their department counselor.

**Graduate Degrees**

For graduate degree requirements and procedures, see Program Requirements for UCLA Graduate Degrees and Standards and Procedures for Graduate Study at UCLA.

**Certificate of Resident Study**

International students who must leave the University and the country before completing a degree or certificate program may request a Certificate of Resident Study in addition to a formal transcript. The certificate cannot be awarded if the studies involved are covered by a diploma or other certificate. The chair of the major department recommends award of the certificate through a petition to the College, school, or Graduate Division. To be eligible to receive the certificate, students must have completed a program of at least nine courses with a minimum GPA of 2.0 (2.5 for Graduate Division students) and have satisfactorily completed a research project over a period of nine months or more.

**GRADUATION**

The awarding of degrees is the culmination of several steps that begin when students identify the term in which they expect to complete degree requirements.
Undergraduate Students

Approximately nine out of every 10 UCLA undergraduates eventually receive a bachelor’s degree, either from UCLA or from another campus or institution. One-third of all UCLA bachelor’s degree recipients go on to graduate school.

Declaration of Candidacy

To initiate the steps leading to the award of a bachelor’s degree, students must identify the term in which they expect to complete degree requirements, through MyUCLA, by the time they complete 160 units (172 units for engineering students). The identified term must be within the academic year (four quarters) subsequent to the term in which students reach or expect to reach the 160- or 172-unit limit. Once they complete 160 or 172 (or more) units, a fee is assessed each time students identify or change the degree-expected term. Current- or past-term candidates over the unit limit must file a Declaration of Candidacy form with the Registrar’s Office.

Friday of the second week of the term is the last day to declare candidacy for the current term (with fee depending on units completed). Declaration of candidacy after week two incurs a late fee, and may result in a degree-award date for the following term.

Students can verify the degree-expected term through MyUCLA. For questions about degree candidacy status, Letters and Science students may inquire at the Registrar’s Office. Arts and Architecture; Engineering; Music; Nursing; and Theater, Film, and Television students should contact their school office; a photo ID is required. Declaring candidacy is not a guarantee of graduation.

In Absentia Graduation

Students who intend to complete degree requirements while nonregistered (those who take a course through UCLA Extension or at another institution, remove an Incomplete grade, and so on) must file a request to graduate in absentia with their degree auditor in 1113 Murphy Hall by the week-two candidacy deadline. Students graduating in absentia are assessed the undergraduate in absentia degree processing fee in addition to the declaration of candidacy fee if they were also not registered in the term immediately prior to their degree-expected term.

Final Degree Audits and Graduation

Degree auditors (at the Registrar’s Office for Letters and Science students; 2200 Broad Art Center for Arts and Architecture students; 6426 Boelter Hall for Engineering students; 1642 Schoenberg Music Building for Music students; 2-147 Factor Building for Nursing students; and 103 East Melnitz Building for Theater, Film, and Television students) are responsible for verifying each candidate’s eligibility for a bachelor’s degree. Degree auditors have information pertaining to a student’s graduation only if that student declared candidacy and completed 160 quarter units (172 units for engineering students).

During their graduating term, students should inform a degree auditor of grade changes, petitions for substitutions or exemptions, transfer credits, or similar changes that may affect their degree. Degree auditors notify students whose graduation eligibility cannot be verified of any requirements still outstanding and other problems in completing the degree.

Student records are closed to revisions in enrollment, grading, and academic actions on award of a degree. Students are responsible for requesting review of their record prior to award of their degree.

A Summary of Shortages for the Bachelor’s Degree statement is sent to each current-term candidate who does not satisfy degree requirements that term. Students who receive such notices should contact a degree auditor immediately. If students expect to satisfy degree requirements in a later term, they must change their degree expected term through MyUCLA or at 1113 Murphy Hall. They may be assessed applicable fees.

Contact degree auditors only for questions about degree audits. Telephone numbers are published on the Registrar’s services directory. For graduation ceremony procedures, contact the College or schools.

Graduate Students

Candidates for both master’s and doctorate degrees must be advanced to candidacy and complete all degree requirements—including the master’s thesis or capstone, or doctoral dissertation—before the degree is conferred. See the filing deadlines calendar for thesis/dissertation filing deadlines. For graduate degree requirements and procedures, see Program Requirements for UCLA Graduate Degrees and Standards and Procedures for Graduate Study at UCLA.

Degree Date

Degrees are awarded at the end of fall, winter, and spring quarters and at the end of summer session C. School of Law and School of Medicine degrees are normally
awarded at the end of fall and spring semesters. Refer to the UCLA quarter, semester, and summer session calendars for the degree award date, which is the final day of the term.

Commencement

The College, each school, and Graduate Division conduct ceremonies for their graduates. Ceremonies feature addresses and recognize candidates who have achieved high academic distinction and honors.

Check with the College, school, or department for eligibility requirements, programs, and time schedules. More information—including the schedule of ceremonies, maps and parking, and updates—is on the commencement website. Information on the Doctoral Hooding Ceremony can be found on the Graduate Division information for candidates web page.

Privacy

Names of students who request that no public information be released do not appear in commencement ceremony programs. Students may change their privacy status on MyUCLA.

Diplomas

Diplomas for both undergraduate and graduate students are available approximately three months after the degree-award date. After week three of their expected term of graduation, students should provide instructions for obtaining the diploma in person or by mail using the diploma request feature on MyUCLA. To expedite receipt of diplomas, instructions should be provided no later than one month after the last day of the degree term. Students may also request diplomas in person at 1113 Murphy Hall or by returning a Diploma Mail Request form. Recorded diploma availability information is available at 310-825-8883.

Change of Name

To be reflected on the diploma, a name change must be submitted on a Legal Name Change or Correction form, with supporting documentation, to the Registrar’s Office, 1113 Murphy Hall, by the last day of the degree-expected term. Once the degree is awarded, only a court order will be accepted to make a name change and the replacement diploma fee applies.

Replacement Diploma

If an original diploma is destroyed, a replacement may be ordered by using the diploma request option on MyUCLA. Students may also order a replacement diploma in person at 1113 Murphy Hall, or by returning a Replacement Diploma Request form. There is a fee for the replacement diploma, and it bears a reissue date and the signatures of the current officials of the state and University.
The UCLA campus has one College and 12 professional schools. Each has its own degree requirements and is headed by a dean who has final academic authority. UCLA students enroll in the University and in the College or one of the schools described in this chapter.

COLLEGE OF LETTERS AND SCIENCE

David C. Schaberg, Dean of Humanities
Victoria L. Sork, Dean of Life Sciences
Miguel A. García-Garibay, Dean of Physical Sciences
Darnell M. Hunt, Dean of Social Sciences
Patricia A. Turner, Dean/Vice Provost of Undergraduate Education
2300 Murphy Hall
310-825-9009
http://www.college.ucla.edu

UCLA is one of the world’s premier universities. At the core of the University’s research programs, graduate training, and undergraduate instruction is the UCLA College of Letters and Science. With over 27,600 students and more than 900 faculty members, the College is the largest academic unit in the UC system and the academic heart of UCLA.

The undergraduate programs in the College stress a liberal arts education that brings together perspectives from many fields in a unified approach to learning. Students learn ways that issues are analyzed, questions are posed, and knowledge is organized. After sampling many general subjects, they concentrate on one field or subject and are required to pursue it rigorously and in depth, according to the standards of scholars in the field. When they reach the graduate level, they pose their own questions, analyze academic issues of their own making and, through their research, participate in the creation of knowledge.

Organization of the College

The College of Letters and Science is organized in five divisions, each led by a dean. A description of each division follows.

Humanities

The Humanities Division promotes, through scholarly inquiry and the transmission of ideas, sensitive, imaginative, and rigorous reflection on the human condition. Courses in literature help students understand the enduring power of texts both great and small—from cuneiform to manuscript to hypertext. Studies of nearly 100 foreign languages create a gateway to civilizations that span the globe and five millennia of human history. Philosophers provide training in the fundamental principles of logic and moral reasoning, and linguists—both theoretical and applied—illuminate the physiological, cognitive, and social aspects of human language. Art historians explore with students the forms and media through which humans have sought to express themselves and to challenge and make sense of their worlds. Programs in the humanities teach students to interpret texts with an informed sensitivity, to evaluate ideas critically, to write clearly and effectively about them, and to be able to question and discuss them with their peers.

Life Sciences

Faculty members and students in the Life Sciences Division play an essential role in unlocking the basic mechanisms of life at the most fundamental level. The geography of Southern California is conducive to life sciences research, since the diverse region is a natural laboratory for environmental biologists, plant and animal ecologists, and evolutionary biologists. Scientists in microbiology and molecular, cell, and developmental biology study embryo formation, cell signaling, and genetics. Neurochemists, neurophysiologists, psychobiologists, and behavior biologists study the underlying mechanisms of the neural basis of behavior. Physiological scientists examine the structure of muscle, hormonal control of behavior, and environmental conditions, such as weightlessness, that affect bone and muscle structure and function. Cognitive psychologists are concerned with the nature of knowledge—how people learn, remember, associate, and think, and how computers relate to human thought processes.

Physical Sciences

Departments in the Physical Sciences Division present the results of human efforts to understand the natural sciences and their physical aspects, including the properties and characteristics of matter and energy; the science of
numbers and order; the origin and structure of the universe, solar system, and Earth; and climatic change and its environmental impact. The bases for the physical sciences are the fundamental laws and proof of mathematics, chemistry, and physics. Studies in the physical sciences are experimental, theoretical, observational, and computational. Faculty members and students are interested in such topics as the nature and evolution of the galaxies; ozone depletion; nuclear winter; greenhouse effect; molecular recognition, interactions, design, synthesis, and structure; evolution of life and the continents; computational mathematics and symbolic logic; superconducting materials; plasma fusion, space plasmas; and high-energy accelerator physics.

Social Sciences

Majors in the Social Sciences Division help students make sense of the rapidly changing world around them by giving them the tools and sensibilities to appreciate the complex interplay of individuals, environment, culture, and economy that makes up their social world. They study human and animal evolution, as well as the transformation of human societies from small groups to states. They explore and debate the meaning of cultural, ethnic, and racial identities in historical and contemporary settings. Some majors challenge students to analyze the role of labor, markets, and exchange, as well as the dynamics of political choices, participation, and institutions. Communication, from interpersonal conversation to mass media, and its impact on personal and political behavior are studied in different fields, while the impact of place and the natural environment are examined through geography. Underlying all of these topics is a drive to capture the elusive nature of human behaviors and relationships through direct observation and the questioning of prevailing theories. In addition, students learn exciting and diverse methods of social and environmental analysis, such as archaeology, linguistics, statistics, game theory, remote sensing and imagery, textual analysis, ethnography, geographic information systems, fieldwork, and ecology.

Undergraduate Education

The Undergraduate Education Division serves as the campuswide advocate for undergraduate education, promoting academic success for the diverse undergraduate population at UCLA and ensuring options for all students to engage in a challenging array of educational opportunities, from foundational general education courses to advanced research and capstone projects.

Academic Advancement Program. The Academic Advancement Program (AAP) is a multiracial, multiethnic, and multicultural program that promotes academic excellence through academic counseling, learning sessions, and mentoring. Students are eligible for AAP if their academic profiles and personal backgrounds may impact their University experience and their retention and graduation from UCLA.

Center for Community Learning. The Center for Community Learning serves faculty members, undergraduate students, and community partners through academic courses and programs, including credit-bearing internships, service learning courses, community-based research, AmeriCorps programs, and the Astin Scholars Program. It is home to the undergraduate minor in Civic Engagement.

Center for Educational Assessment. The Center for Educational Assessment (CEA) supplies information and analysis to support planning, program and policy development, and other decision making about undergraduate education at UCLA.

College Academic Counseling. College Academic Counseling (CAC) advises College undergraduate students on academic regulations and procedures, course selection, preparation for graduate and professional programs, selection of appropriate majors, and the options and alternatives available to enhance a UCLA education.

Honors Programs. Honors Programs offers academic programs and services designed to promote an outstanding honors education, including College Honors, Honors Collegium, Departmental Scholar Program, Individual Majors Program, Honors Scholarships, Honors Research Stipends, and specialized counseling and support services for College honors students.

New Student and Transition Programs. New Student Orientation is the first introduction to UCLA for new students. During the three-day first-year student sessions and the one- and two-day transfer student sessions, a unique set of comprehensive and engaging programs is offered to make student transitions to UCLA great ones.

Office of Instructional Development. The Office of Instructional Development (OID) supports undergraduate education by enhancing teaching and learning opportunities. Through grants, programs, and services, OID promotes the effective use of current and emerging instructional methodologies and technologies.

Scholarship Resource Center. The Scholarship Resource Center (SRC) is designed to help students in the search for private scholarships, regardless of financial aid eligibility. The center also houses the Phi Beta Kappa Office.

Transfer Alliance Program. The Transfer Alliance Program (TAP) seeks to strengthen academic ties between UCLA and honors programs in over 45 California community colleges, offering specialized transfer programs for participating students.

Undergraduate Education Initiatives. Undergraduate Education Initiatives are innovative programs designed for undergraduate students that feature best practices in undergraduate education and attract UCLA’s most distinguished faculty members from all campus areas. Programs include UCLA General Education, Fiat Lux Freshman Seminar Program, Cluster Program, Undergraduate Student Initiated Education Program, and Writing II Program.

Undergraduate Research Centers. Undergraduate Research Centers (URC)—one for students in the arts, humanities, social sciences, and behavioral sciences and one for students in science, engineering, and mathematics—exist as part of a continuing effort by the College to engage undergraduate students in research and creative activities at all levels.
Degrees
The College offers more than 133 majors leading to the Bachelor of Arts or Bachelor of Science as well as to master’s and doctorate degrees. In addition, the College offers more than 82 undergraduate minors.
For a complete list of College of Letters and Science degrees, see the Majors and Degrees chapter.

Undergraduate Degree Requirements
Degree programs in the College offer students a variety of intellectual challenges by combining a wide distribution of courses and the opportunity to specialize in one particular field. To this end, students are required to select lower-division courses that furnish general foundations of human knowledge. In upper-division courses, they concentrate on one major field of interest.

As described below, College students must satisfy University requirements, College requirements, and department requirements for the Bachelor of Arts or Bachelor of Science degree.

University Requirements
The University of California has two requirements that undergraduate students must satisfy to graduate: Entry-Level Writing or English as a Second Language, and American History and Institutions. Students who do not satisfy the Entry-Level Writing requirement prior to enrollment must pass an approved course or other program prescribed by their UC campus of residence. Only after satisfying the Entry-Level Writing requirement can they take an English composition course for transfer credit after enrolling at UCLA. See Degree Requirements in the Undergraduate Study chapter for details.

College Requirements
The College of Letters and Science has eight requirements that must be satisfied for the award of the degree.

Unit Requirement
Students must satisfactorily complete for credit a minimum of 180 units for the bachelor’s degree. At least 60 of the 180 units must be upper-division courses numbered 100 through 199. A maximum of 216 units is permitted. Students with Advanced Placement Examination or International Baccalaureate Examination (transfer) credit may exceed the unit maximum by the amount of that credit.

Scholarship Requirement
Students must earn at least a C (2.0) grade-point average in all courses undertaken at UCLA for receipt of the bachelor’s degree. They must also attain a 2.0 GPA in a major and satisfy both the course and scholarship requirements for that major, including preparation for the major. Some majors have additional requirements.

Academic Residence Requirement
Thirty-five of the final 45 units completed for the bachelor’s degree must be earned in residence in the College. A minimum of 24 upper-division units must be completed in the major while in residence in the College. The academic residence requirements apply to all students, both continuing and transfer.

Writing Requirement
Students must complete the University Entry-Level Writing or English as a Second Language (ESL) requirement prior to completing the College writing requirement.

New students admitted to the College are required to complete a two-term writing requirement—Writing I and Writing II. Two courses in English composition are required for graduation. Both courses must be taken for letter grades, and students must receive grades of C or better (C– grades are not acceptable).

Writing I. The Writing I requirement must be satisfied within the first three terms of enrollment by completing English Composition 3, 3D, 3DS, or 3SL with a grade of C or better (C– or a Passed grade is not acceptable).

The Writing I requirement may also be satisfied by (1) scoring 4 or 5 on one of the College Board Advanced Placement Examinations in English, (2) a combination of a score of 720 or better on the SAT Reasoning Test, Writing section (last administered in January 2016) and superior performance on the English Composition 3 Proficiency Examination, (3) completing a course equivalent to English Composition 3 with a grade of C or better (C– or a Passed grade is not acceptable) taken at another institution, or (4) scoring 5, 6, or 7 on an International Baccalaureate Higher Level Examination.

Students whose native language is not English may need to take English Composition 1A, 1B, and 2I before enroll-
ing in a Writing I course. All courses in the sequence must be passed with a grade of C or better (C– or a Passed grade is not acceptable).

Qualifying examination scores and courses are determined by the College Faculty Executive Committee.

**Writing II.** The Writing II requirement must be satisfied within seven terms of enrollment by completing one course from a list approved by the College Faculty Executive Committee. The course must be completed with a grade of C or better (C– or a Passed grade is not acceptable). Writing II courses are listed in the Schedule of Classes.

Applicable Writing II courses may also fulfill preparation for the major requirements and, if approved for general education (GE) credit, may fulfill a GE requirement.

Transfer students with 90 or more units who have completed the Intersegmental General Education Transfer Curriculum (IGETC) will have satisfied the Writing I, Writing II, and reciprocity requirements. No transfer student is admitted to the College without completing, with a grade of C or better (C– grade is not acceptable), a college-level writing course that Undergraduate Admission accepts as equivalent to English Composition 3.

**Quantitative Reasoning Requirement**

The quantitative reasoning requirement may be satisfied by completing one approved UCLA course (see list below) or an equivalent course within the first seven terms of enrollment. The course must be taken for a letter grade, and students must receive a grade of C or better (C– grade is not acceptable).

The requirement may also be satisfied by achieving an SAT Reasoning Test Mathematics Section score of 600 or better for exams taken January 2016 or earlier, or achieving an SAT Mathematics section score of 620 or better for exams taken March 2016 or later, or an SAT Subject Test in Mathematics score of 550 or better, or an ACT mathematics exam score of 26 or better. Approved UCLA courses and examinations, and qualifying scores, are determined by the College Faculty Executive Committee. Approved courses are listed below.

Applicable courses may also be applied toward preparation for the major requirements and, if approved for general education (GE) credit, may fulfill a GE requirement.

Transfer students with 90 or more units who have completed the Intersegmental General Education Transfer Curriculum (IGETC) will have satisfied the quantitative reasoning and reciprocity requirements. No transfer student is admitted to the College without completing, with a grade of C or better (C– grade is not acceptable), a college-level quantitative reasoning course that Undergraduate Admission accepts as equivalent to those approved by the College Faculty Executive Committee.

Approved courses include
- Biostatistics 100A, 100B
- Life Sciences 20, 30A
- Mathematics 2 (or any higher-number course except 19, 71SL, 72SL, 89, 89HC, 98XA, 98XB, 99, 103A-103C, 105A-105B-105C, 189, 189HC, 195, 197, 199)
- Philosophy 31
- Political Science 6, 6R
- Program in Computing 10A, 10B, 10C
- Statistics 10, 12, 13

**Foreign Language Requirement**

The foreign language requirement may be satisfied by one of the following methods: (1) completing a college-level foreign language course equivalent to level three or above at UCLA with a grade of C or Passed or better or (2) scoring 3, 4, or 5 on the College Board Advanced Placement (AP) foreign language examination in Chinese, French, German, Italian, Japanese, or Spanish, or scoring 4 or 5 in Latin, thereby earning College credit or (3) presenting a UCLA foreign language departmental examination score indicating competency through level three. Consult the Schedule of Classes or the appropriate department for times and places of the regularly scheduled examinations. Students who wish to demonstrate proficiency in a language that is taught in a UCLA department that has no scheduled examination should contact the appropriate department to arrange for one. Students wishing to take an examination in a language not taught at UCLA should contact a College counselor.

Transfer students with 90 or more units who have completed the Intersegmental General Education Transfer Curriculum (IGETC) will have satisfied the foreign language and reciprocity requirements.

The Registrar’s foreign language requirement web page publishes courses that may be used to fulfill this requirement.

**Diversity Requirement**

The diversity requirement may be satisfied by completing one course from the faculty-approved list of courses. The course must be taken for a letter grade, and students must receive a grade of C or better (C– grade is not acceptable). Applicable courses may also fulfill major, minor, or elective requirements and, if approved for general education (GE) credit, may fulfill a GE requirement. A list of approved courses is available in the Schedule of Classes.

**General Education Requirements**

**General education (GE)** is more than a checklist of required courses. It is a program of study that reveals to students the ways that research scholars in the arts, humanities, social sciences, and natural sciences create and evaluate new knowledge, introduces students to the important ideas and themes of human cultures, fosters appreciation for the many perspectives and the diverse voices that may be heard in a democratic society, and develops the intellectual skills that give students the dexterity they need to function in a rapidly changing world. This entails the ability to make critical and logical assessments of information, both traditional and digital; deliver reasoned and persuasive arguments; and identify, acquire, and use the knowledge necessary to solve problems.
Applicable courses may also be fulfill major, minor, or elective requirements and, if approved for diversity or writing, may fulfill the diversity requirement and/or Writing II requirement.

FOUNDATIONS OF KNOWLEDGE

Students follow a general education curriculum that is grouped into three foundational areas: Foundations of the Arts and Humanities, Foundations of Society and Culture, and Foundations of Scientific Inquiry.

Ten courses (48 units minimum) are required. GE-approved Writing II courses may fulfill an appropriate foundational area. See the foundational area descriptions below for a breakdown of courses required.

Students who complete a yearlong GE Cluster series fulfill the Writing II requirement, complete 40 percent of their general education requirements, and receive laboratory/demonstration credit where appropriate.

Courses listed in more than one category can fulfill GE requirements in only one of the cross-listed categories.

Foundations of the Arts and Humanities. Three 5-unit courses, one from each subgroup:
- Literary and Cultural Analysis
- Philosophical and Linguistic Analysis
- Visual and Performance Arts Analysis and Practice

The aim of courses in this area is to supply perspectives and intellectual skills necessary to comprehend and think critically about our situation in the world as human beings. In particular, the courses furnish the basic means to appreciate and evaluate the ongoing efforts of humans to explain, translate, and transform their diverse experiences of the world through such media as language, literature, philosophical systems, images, sounds, and performances. The courses introduce students to the historical development and fundamental intellectual and ethical issues associated with the arts and humanities and may also investigate the complex relations between artistic and humanistic expression and other facets of society and culture.

Foundations of Society and Culture. Three 5-unit courses, one from each subgroup and a third course from either subgroup:
- Historical Analysis
- Social Analysis

The aim of courses in this area is to introduce students to the ways in which humans organize, structure, rationalize, and govern their diverse societies and cultures over time. The courses focus on a particular historical question, societal problem, or topic of political and economic concern in an effort to demonstrate how issues are objectified for study, how data is collected and analyzed, and how new understandings of social phenomena are achieved and evaluated.

Foundations of Scientific Inquiry. Four courses, two from each subgroup. One 5-unit course from each subgroup must include either laboratory/demonstration or Writing II credit. For students entering fall quarter 2009 through spring quarter 2018, the laboratory requirement is reduced to one 5-unit course from either subgroup. Other courses in the subgroups may be 4 units.

<table>
<thead>
<tr>
<th>Foundations of Knowledge GE plan</th>
<th>Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>total = 18 units minimum (17 min. fall 2009–spring 2018)</td>
<td>10 Courses/48 Units Minimum</td>
<td>(10 Courses/47 Units Minimum F09-S18)</td>
</tr>
</tbody>
</table>

is reduced to one 5-unit course from either subgroup. Other courses in the subgroups may be 4 units:
- Life Sciences
- Physical Sciences

The aim of courses in this area is to ensure that students gain a fundamental understanding of how scientists formulate and answer questions about the operation of both the physical and biological world. The courses also deal with some of the most important issues, developments, and methodologies in contemporary science, addressing such topics as the origin of the universe, environmental degradation, and the decoding of the human genome. Through lectures, laboratory experiences, writing, and intensive discussions, students consider the important roles played by the laws of physics and chemistry in society, biology, Earth and environmental sciences, and astrophysics and cosmology.

Foundations Course Lists. Creating and maintaining a general education curriculum is a dynamic process; consequently, courses are frequently added to the list. For the most current list of approved courses that satisfy the Foundations of Knowledge GE plan, consult an academic adviser or see the Schedule of Classes.

Advanced Placement Examination Credit

Students may not use Advanced Placement (AP) Examination credit to satisfy the College’s 10-course foundational area general education requirement. See the College AP table on the Admission AP credit web page. Consult a departmental adviser for applicability of AP credit toward
course equivalencies or satisfaction of preparation for the major requirements.

**Reciprocity with Other UC Campuses**

Students who transfer to UCLA from other UC campuses and have met all GE requirements prior to enrolling at UCLA are not required to complete the College GE requirements. Written verification from the dean at the other UC campus is required. Consult a College counselor regarding eligibility for this option.

**Intersegmental General Education Transfer Curriculum**

Transfer students from California community colleges have the option to fulfill UCLA lower-division GE requirements by completing the Intersegmental General Education Transfer Curriculum (IGETC) prior to transfer. The curriculum consists of a series of subject areas and types of courses that have been agreed on by the University of California and the California community colleges. Although GE or transfer core courses are degree requirements rather than admission requirements, students are advised to fulfill them prior to transfer. The IGETC significantly eases the transfer process, as all GE requirements are fulfilled when students complete the IGETC courses. Students who are unable to complete one or two IGETC courses prior to transfer may request certification of partial completion of IGETC from their community college. On certification, the remaining courses must be completed with a minimum grade of C or better or Passed in each. Students who fail to complete the remaining IGETC coursework or who are otherwise not eligible for IGETC or partial IGETC are required to complete the College GE requirements. Consult a college adviser regarding this prior to enrolling in any courses.

**Department Requirements**

College of Letters and Science departments generally set two types of requirements that must be satisfied for the award of the degree: preparation for the major (lower-division courses) and the major (upper-division courses). Departments also set requirements for minors and specializations.

**Preparation for the Major**

Admission to a major may requires completion of a set of courses known as preparation for the major. Some majors admit applicants to premajor status until requisite courses are satisfactorily completed. Students in life sciences majors must complete a set of preparatory courses known as the Life Sciences Core Curriculum. Each department sets its own preparation for the major and eligibility requirements; see the Curricula and Courses chapter of this catalog.

**The Major**

A major in the College consists of a group of coordinated upper-division courses and is designated as departmental, interdepartmental, or individual. Each course applied toward the major and preparation for the major must be taken for a letter grade unless otherwise stipulated by the department. Students who have been away from the University for several terms should consult with their major department or curriculum adviser concerning the requirements under which they are to graduate.

Each department sets its own major requirements; see the Curricula and Courses chapter of this catalog.

**Departmental Majors.** A departmental major consists of a minimum of 36 upper-division units and a maximum of 60 upper-division units. The majors are established and supervised by campus departments.

**Interdepartmental Majors.** An interdepartmental major consists of a minimum of 48 upper-division units and a maximum of 75 upper-division units, of which no more than 32 units may be coursework in one department. The programs are administered by interdepartmental committees made up of faculty whose membership is determined by research interest, not by departmental affiliation. By cutting across the usual lines of departmental division, a field is studied from the perspectives of different disciplines and a greater degree of program flexibility is achieved.

**Individual Capstone Majors.** If students have some unusual but definite academic interest for which no suitable major is offered at the University and have completed at least three terms of work (45 units minimum) at the University with a grade-point average of 3.4 or better, they may petition for an individual capstone major. The consent of the College Honors Programs and the assistance of a faculty adviser are required. Individual majors must be approved by the vice provost for Undergraduate Education. The individual major must consist of at least 48 and no more than 60 upper-division units, a majority of which must be in departments offering a major in the College. A capstone senior thesis of at least 8 but no more than 12 units is required. For details about individual majors, contact Honors Programs, A311 Murphy Hall.

**Double Majors.** Students in good academic standing and on track to graduate on time may be permitted to have a double major consisting of majors from two departments within the College. Both majors must be completed within the maximum limit of 216 units, and students must obtain the approval of both departments and the College.

With few exceptions, double majors in the same department are unacceptable. No more than 20 upper-division units may be shared by both majors.

**Minors and Specializations**

Students may choose to pursue a minor to complement their major program of study. Minors consist of no fewer than seven courses (28 units) and no more than nine courses (36 units). Some minors also have admission requirements.

The Computing specializations are sequences of supplemental courses that enhance work in a major.

For a list of minors and specializations, see Undergraduate Minors and Specializations at the beginning of this catalog; descriptions are in the Curricula and Courses chapter.
Policies and Regulations

Degree requirements are subject to policies and regulations, including the following:

Student Responsibility

Students should take advantage of academic support resources, but they are ultimately responsible for keeping informed of and complying with the rules, regulations, and policies affecting their academic standing.

Study List

The study list is a record of classes that a student is taking for a particular term. The allowable study list load is up to 19 units. After the first term, students may petition to enroll in more than 19 units if they attained at least a B average the preceding term in a total program of at least 15 units and have an overall grade-point average of 3.0. First-term transfer students from any other campus of the University may carry excess units on the same basis as students who have completed one or more terms at UCLA; however, they are not encouraged to do so.

Progress toward the Degree

UCLA is a full-time institution, and it is expected that students complete their undergraduate degree requirements promptly. Normal progress toward graduation in four years is defined as the completion of 45 units per year, or 15 units per term.

The Degree Audit is a record of degree requirements and the courses taken to fulfill them. Students are responsible for monitoring their progress toward the degree. They must read and understand the catalog, check the online catalog for updates, and consult regularly with the College and department counselors to confirm they are satisfying all program requirements. Department counselors advise students on progress and completion of the major requirements. Counselors in College Academic Counseling, the Academic Advancement Program, Honors Programs, and Student Athletics Counseling assist students with College requirements, degree planning, and Degree Audits on request. Students can also view Degree Audits through MyUCLA.

Minimum Progress/Expected Cumulative Progress

During a regular term of enrollment, undergraduate students in the College are required to enroll in a minimum of 13 units. Students are also required to meet cumulative progress unit expectations as outlined in the Expected Cumulative Progress table.

The following courses count toward minimum progress and expected cumulative progress, as well as any other degree requirement, but are exempt from the maximum unit limit of 216:

- 19 (Fiat Lux)
- 88S (Undergraduate Student Initiated Education [USIE] seminars)
- 89 and 189 (honors seminars)
- 89HC and 189HC (honors contracts)
- M97X (PEERS lectures)
- 98X, 98XA, and 98XB (PEERS laboratories)
- 99 (student research tutorials)
- 190 (research colloquia)
- 193 (journal club seminars)
- 194 (research group or internship seminars)
- Honors Collegium 101A through 101J
- Mathematics 71SL and 72SL
- Science Education 1SL and 10SL

Reduced Fee Programs

While full-time study is expected and required of students, some students may qualify for part-time study due to compelling reasons of occupation, home and family responsibilities, or health. Under this policy, part-time status is defined as 10 units or less per term based on enrolled units at the end of the third week, and is presumed to be of a permanent nature. On approval of part-time status, a reduction of the tuition fee by one half and a reduction of the nonresident supplemental tuition fee by one half are approved.

To be eligible for part-time study, students must provide documentation of occupation, home and family responsibility, or health that prevents them from carrying a full-time study load, as well as documentation of a need for part-time study for a minimum of three consecutive terms. Once approved for part-time study, students must complete two courses of 10 units or less in each of the three consecutive terms. Only under documented extraordinary circumstances is a one-course study list approved. Documentation must specify that a one-course study list is warranted.

Students should obtain a Fee Reduction Request from the Registrar's reduced fee programs web page. The application for part-time study must be submitted with accompanying documentation by Friday of the second week of the term. Students approved for part-time study who become enrolled in or receive credit for more than 10 units during a term must pay the full fees for that term.

Declaring a Major

Students are expected to select a major by the beginning of their junior year. This may be a program of related upper-division courses within a single department (departmental major) or a group of related courses involving a number of departments (interdepartmental major) or, under certain circumstances, a group of courses selected to meet a special need (individual capstone major).

Most entering freshmen are unsure about specific academic goals and request to be admitted to the College as "undeclared." These students then explore fields of study by taking introductory courses in the physical and life sciences, social sciences, and humanities in search of an area that most excites their interest.

All students with 90 or more units toward a degree are expected to declare a premajor or a major. When they are ready to do so, they obtain approval from the department.
or interdepartmental degree committee that governs their intended major.

**Changing a Major**

Students in good academic standing who wish to change their major may petition to do so provided they can complete the new major within the 216-unit limit and are on track to graduate on time. Petitions must be submitted to and approved by the department or committee in charge of the new major. Admission to certain majors may be closed or restricted; changes are normally not permitted if students are on probation or have begun their last term.

Students who fail to attain a grade-point average of 2.0 (C) in preparation for the major or major courses may be denied the privilege of entering or continuing in that major. Some departments may have higher grade-point requirements for their preparation and major courses or other restrictions; consult the appropriate department regarding minimum standards and eligibility requirements.

**Re-entering Students and Their Majors**

Students returning to the University to resume their studies after an absence of several years may find their previous major area of study no longer available. They then must select a current major in which to complete their studies. Consult an academic adviser for assistance.

**Credit Limitations**

The following credit limitations apply to all undergraduate students enrolled in the College. In many cases units are not deducted until the final term before graduation. Students with questions should consult an academic adviser.

Transfer students with credit from other institutions (advanced standing credit) receive a Degree Progress Report (DPR) or Degree Audit from Undergraduate Admission indicating the transferable units from former institutions; however, the following credit limitations may reduce the total number of transferred units that apply toward the degree in the College. Consult an adviser in College Academic Counseling about these limitations.

**Advanced Placement Examinations.** Advanced Placement (AP) Examination credit may not be applied toward a degree unless students had less than 36 units of credit at the time of the examination(s). See the College AP table on the Admission AP credit web page for UCLA course equivalents and credit allowed for GE requirements.

**College Level Examination Program.** Credit earned through the College Level Examination Program (CLEP) and through the California State University English Equivalency Examination may not be applied toward the bachelor’s degree.

**Community College/Lower Division Transfer Limitation.** Effective for students admitted fall 2017 and later, after completing 105 lower-division quarter units toward the degree in all institutions attended, students are allowed no further unit credit for courses completed at a community college or for lower-division courses completed at any institution outside of the University of California.

**Credit by Examination.** Within the College, eligibility for credit by examination is usually limited to students who have been approved as Departmental Scholars or who are admitted to a departmental honors program or Honors Programs. Students who have completed a minimum of 12 units at UCLA with a minimum 3.5 overall grade-point average may petition for credit by examination. The examination for that course must be taken successfully before they may petition for credit by examination in another course.

Students may receive credit by examination for only one course out of 10 courses completed. Credit by examination may not be used to gain credit for prior knowledge, audited courses, or courses taken elsewhere. Units for a course taken by examination are applied toward the 216-unit maximum allowable units for graduation. Petitions for credit by examination (with fee) are available only through an appointment with a counselor in Honors Programs, A311 Murphy Hall.

**Education Abroad Program.** Students participating in the Education Abroad Program may receive a maximum of 48 units of credit toward the degree in addition to the 8 units maximum allowed for the Intensive Language Program.

**Foreign Language.** Credit is not allowed for completing a less advanced course in grammar and/or composition after students have received credit for a more advanced course. College credit for an international student’s native language and literature is allowed for (1) courses taken in native colleges and universities or (2) upper-division (advanced language courses only) and graduate courses taken at the University of California or another English-speaking institution of approved standing. No credit is allowed for lower-division courses.

**Performance Courses.** No more than 12 units of music and/or dance performance courses (Dance 5, 6 through 16, 56 through 65, C109A, C113A, 114, C115, 116, Ethnomusicology 91A through 91Z, 161A through 161Z, Music 60A through 65, C90A through 90S, 160A through 165, and World Arts and Cultures 114) may be applied toward the bachelor’s degree whether taken at UCLA or another institution.

**Physical Education.** No more than 4 units in physical education activity courses may be applied toward the bachelor’s degree.

**Physics Courses.** Any two or more courses from Physics 1A, 1AH, and 6A are limited to a total of 6 units of credit.

**ROTC Courses.** For students contracted in the Aerospace Studies Department, 36 units of aerospace studies credit may be applied toward the requirements for the bachelor’s degree; for students contracted in the Military Science Department, 26 units of military science credit may be applied; for students contracted in the Naval Science Department, 26 units of naval science credit may be applied.

**Statistics Courses.** Credit is allowed for only one of the following introductory statistics courses: Statistics 10, 12, 13 (or former 10H, 11, or 14), or any equivalent course taken at UCLA or another institution.

**Upper-Division Tutorials.** No more than 8 units of credit may be taken per term in upper-division tutorials numbered 195 through 199. The total number of units allowed...
in such courses for a letter grade is 32; see specific restric-
tions under each departmental listing.

300- and 400-Level Courses. No more than 8 units in the
300 and 400 series of courses may be applied toward the
bachelor’s degree. Credit is not granted for X300 and X400
courses taken in UCLA Extension.

Academic Advising Services
The College offers academic advising to help students
develop and thrive, both personally and academically,
through individual meetings with an adviser in their
advising unit: Academic Advancement Program, College
Academic Counseling, Honors Programs, or Student Ath-
etics. College advisers work with students to plan their
programs, understand requirements and regulations, learn
about available resources, navigate the university, and
maximize their undergraduate careers.

Academic Advancement Program
Academic Advancement Program (AAP) values student
diversity and fosters student empowerment. AAP counsel-
ors assist students in planning an academic program and
meeting College and University requirements. They also
monitor degree progress and connect students with cam-
pus resources and opportunities. Counselors are available
for scheduled or same-day appointments. Visit 1205
Campbell Hall or call 310-825-1481.

AAP peer counselors provide peer support and an under-
graduate-focused view of life at UCLA. They also can assist
students with planning an academic program and navi-
gating campus resources.

College Academic Counseling
College Academic Counseling (CAC) is committed to
making students’ campus life and learning experience a
positive one. Academic advising helps students develop
and thrive both personally and academically in individual
meetings to plan their programs, understand require-
ments and regulations, learn about available resources,
navigate the university, and maximize their undergradu-
ate careers. From orientation to graduation, CAC offers
information, assistance, and support so that students can
make well-informed decisions about their course of study
and degree progress. For additional information or advis-
ing, students may come to A316 Murphy Hall, Monday
through Friday from 8:30 a.m. to 4:30 p.m., or call 310-
825-3382.

College Academic Mentors work with first and second
year students and new transfers for academic advising,
choosing a major, and preparing for graduate or profes-
sional school. Students can also visit ASK Peer Counsel-
ors at five locations around campus for quick questions
on degree requirements, rules and regulations, deadlines,
petitions, and more.

Honors Programs
Honors Programs offers academic counseling and stu-
dent advising services in a welcoming, safe, and support-
ive environment. Honors counselors are specially trained
professionals whom students collaborate with for pre- and
post-graduate planning, while Honors student affairs
advisors assist students in navigating the various univer-
sity processes, rules, and regulations.

Students are welcome to visit the Honors Programs office,
A-311 Murphy Hall, or call 310-825-1553.

Student Athletics
Student athletes are assigned an Academic and Student
Services (AS2) College academic counselor, whose role is
to provide academic advice and direction in the areas of
program planning, academic difficulty counseling, degree
requirements, and major selection. Visit the Morgan Cen-
ter or call 310-825-8699.

Honors
College undergraduate students who achieve scholastic
distinction may qualify for the following honors and pro-
grams:

College Honors
The highest academic recognition the College confers on
its undergraduate students is College Honors, which is
awarded to graduating seniors who successfully complete
the College Honors program and who have an overall
University of California grade-point average of 3.5 or bet-
ter. The program offers exceptional undergraduate stu-
dents an opportunity to pursue individual excellence.

Dean’s Honors
The Dean’s Honors list recognizes high scholastic achieve-
ment in any one term. The following criteria are used to
note Dean’s Honors on the student records: (1) a 3.75
grade-point average in any one term with at least 12
graded units and no grade of NP or I or (2) a 3.66 GPA and
at least 56 grade points during the term, with no grade of
NP or I. Dean’s Honors are automatically recorded on the
transcript.

Departmental Honors
Individual departments and programs in the College offer
departmental honors programs. Admission and curricular
requirements vary according to the department or pro-
gram. See the Curricula and Courses chapter of this cata-
log for details, and consult the departmental adviser
about procedures and arrangements. Students who suc-
cessfully complete the requirements graduate with depart-
mental honors or highest honors.

Latin Honors
Students who have achieved scholastic distinction may be
awarded the bachelor’s degree with Latin honors. To be
eligible, students must have completed 90 or more units
for a letter grade at the University of California and must
have attained an overall grade-point average at graduation
that places them in the top five percent of College gradu-
ates (GPA of 3.908 or better) for summa cum laude, the
next five percent (GPA of 3.831 or better) for magna cum
laude, and the next 10 percent (GPA of 3.713 or better) for
cum laude. Coursework taken on the Education Abroad
Program is applied toward Latin honors at graduation. The minimum GPAs required are subject to change on an annual basis. Required GPAs in effect in the graduating year (fall, winter, spring, summer) determine student eligibility. Students should consult their Degree Audits, or the Registrar’s Latin honors web page for the most current calculations of Latin honors.

Departmental Scholar Program

Departments may nominate exceptionally promising undergraduate students (juniors and seniors) as UCLA Departmental Scholars to pursue bachelor’s and master’s degrees simultaneously. Qualifications include completion of 24 courses (96 quarter units) at UCLA or the equivalent at a similar institution, the requirements in preparation for the major, and eligibility to participate in the College Honors program. Students must also have at least one term of coursework remaining at UCLA. To obtain both the bachelor’s and master’s degrees, students must be provisionally admitted to the Graduate Division, fulfill requirements for each program, and maintain a minimum B average. No course may be used to fulfill requirements for both degrees. Interested students should consult their department well in advance of application dates for graduate admission. For more information, contact the Honors Programs Office in A311 Murphy Hall.

Graduate Study

The College of Letters and Science offers graduate students a variety of opportunities for academic pursuit, faculty-sponsored research, and fieldwork relative to specific programs and career goals.

With Graduate Division approval and subject to University minimum requirements, each department sets its own standards for admission and other requirements for the award of master’s and doctorate degrees. For complete degree requirements, see Program Requirements for UCLA Graduate Degrees.

For information on the proficiency in English requirements for international graduate students, see Graduate Admission in the Graduate Study chapter of this catalog.

Degrees

The Geffen School of Medicine offers an MD degree program and postgraduate medical training programs; and faculty members participate in the Graduate Programs in Bioscience. Additional master’s and doctorate degrees are offered through the UCLA Graduate Division.

Biological Chemistry MS, PhD
Biomathematics MS, PhD
Clinical Research MS
Human Genetics MS, PhD
Medicine MD
Microbiology, Immunology, and Molecular Genetics MS, PhD
Molecular and Medical Pharmacology MS, PhD
Molecular, Cellular, and Integrative Physiology PhD
Neurobiology MS, CPhil, PhD
Neuroscience PhD
Pathology—Cellular and Molecular Pathology MS, PhD
Physics and Biology in Medicine MS, PhD
Psychiatry and Biobehavioral Sciences Clinical Psychology Internship Certificate

Articulated Degree Programs

Medicine MD/Any Graduate Division major PhD

Concurrent Degree Programs

Medicine MD/Management MBA
Medicine MD/Public Policy MPP

MD Degree Program

The Doctor of Medicine (MD) degree program is a four-year medical curriculum that prepares students broadly for careers in research, practice, and teaching in the medical field of their choice.

For details on the MD curriculum, see the curriculum web page. For information about applying to the program, see the application web page or contact the Geffen School of Medicine Admissions Office, 17-253 East Center for Health Sciences, Box 957035, Los Angeles, CA 90095-7035.
Articulated Degree Programs
The Geffen School of Medicine and the Graduate Division offer the Medical Scientist Training Program, an articulated degree program that allows students to earn both the MD and PhD in about eight years, depending on the course of study and research. The PhD may be awarded in one of several medical or social sciences fields.

Concurrent Degree Programs
Concurrent programs with the Anderson Graduate School of Management and Luskin School of Public Affairs, and an articulated program with the Fielding School of Public Health, allow UCLA medical students to earn both the MD and MBA, MD and MPP, or the MD and MPH degrees over five years by following a designated course of study and some shared coursework. Separate application must be made to the Anderson School, Luskin School of Public Affairs, and an articulated program with the Fielding School of Public Health during the third year of medical school.

Special Programs
Partnership Programs
Extending medical education to a broader segment of tomorrow’s physicians and researchers, the Geffen School of Medicine admits a select group of students into two innovative partnership programs. In addition to completing the requirements for the MD degree, students engage in specialized coursework and/or projects designed to fulfill the mission of each program.

Charles Drew/UCLA Medical Education Program
The mission of the Charles Drew (CDU)/UCLA Medical Education Program is to train students to practice medicine with competence and compassion in disadvantaged rural and urban communities. Each year 24 students are admitted to the program. Students spend their first two years at the UCLA campus and complete their last two years of clinical work in specially designated training centers in medically underserved communities and at UCLA and affiliated hospitals. A distinguishing component of the program is the required medical research thesis.

UCLA PRIME Program
The UCLA PRIME Program is a five-year dual degree program to develop leaders in medicine who address policy, care, and research issues in health care for underserved populations. A commitment to serve and experience in working with diverse medically disadvantaged populations is paramount. The program leads to the MD and a master’s degree in areas that complement the mission of the program. Each year the class is comprised of 18 students. Students identify with one of two programs: PRIME UCLA-Westwood or PRIME UCLA-CDU.

Postgraduate Medical Training
Postgraduate medical training programs, including residencies, are offered through all the clinical departments at UCLA and the affiliated training hospitals such as Harbor-UCLA, Cedars-Sinai, and Greater Los Angeles VA System. Programs at the affiliated institutions broaden the scope of the teaching programs by providing extensive clinical facilities, special population settings, and diverse practice modes. Information about these programs is available from the individual clinical departments of the Geffen School of Medicine or the affiliated hospitals.

Semel Institute for Neuroscience and Human Behavior
The Semel Institute is one of the world’s leading interdisciplinary research and education institutes devoted to the understanding of complex human behavior. Fourteen research centers ranging from genetics to human culture, together with research initiatives distributed widely across the academic departments of the Geffen School of Medicine and the College of Letters and Science, offer a comprehensive and outstanding research and training environment for the study of neuroscience and behavior. The research portfolio of the 400 faculty members, graduate students, and fellows who work in the institute spans behavioral genetics, developmental neurobiology, cognitive neuroscience, neuropharmacology, brain imaging, clinical research, health policy, and sociocultural studies of human behavior and its disorders.

GRADUATE SCHOOL OF EDUCATION AND INFORMATION STUDIES
Marcelo M. Suárez-Orozco, Dean
1009 Moore Hall
310-825-8326
info@gseis.ucla.edu
https://gseis.ucla.edu

The Graduate School of Education and Information Studies (GSE&IS) at UCLA is dedicated to inquiry, the advancement of knowledge, the improvement of professional practice, and service to the education and information professions. GSE&IS develops future generations of scholars, teachers, information professionals, and institutional leaders. Its work is guided by the principles of individual responsibility and social justice, an ethic of caring, and commitment to the communities it serves.

Faculty members and students of GSE&IS combine a passion and skill for cutting-edge research with an appreciation for its application in the widely diverse cultures and communities in which it exists. These communities serve as fertile training ground for students in all programs, through internships, research projects, summer placements, and teaching opportunities.

GSE&IS is committed to the highest quality professional education and to the application of research and scholarship to the challenges facing a diverse and increasingly urbanized world.
Departments and Programs

The school consists of two departments—the Department of Education and the Department of Information Studies. Both have a clear and strong commitment to the pursuit of excellence in their research-oriented and professional degree programs.

Research-oriented master’s and doctoral programs prepare top scholars in their respective fields, while future librarians, archivists, and information professionals, teachers, student affairs practitioners, school administrators, and superintendents are prepared in the various master’s and doctoral professional degree programs. Additionally, the UCLA Lab School (Corinne A. Seeds campus) and the UCLA Community School offer an innovative educational program for students PreK-6 and K-12, respectively.

Degrees

The Graduate School of Education and Information Studies offers the following degrees and undergraduate minor:

- Education MA, MEd, EdD, PhD
- Educational Administration Joint EdD with UC Irvine
- Information Studies PhD
- Library and Information Science MLIS, accredited by American Library Association
- Special Education Joint PhD with California State University, Los Angeles

Articulated Degree Programs

- Education MEd/Latin American Studies MA
- Library and Information Science MLIS/Latin American Studies MA

Concurrent Degree Programs

- Education MEd, MA, EdD, or PhD/Law JD
- Library and Information Science MLIS/Management MBA

Credential Programs

The school offers two credential programs accredited by the California Commission on Teacher Credentialing:

- Preliminary Administrative Services Credential
- Teacher Credential

Undergraduate Minor

Education Studies

Admission

Admission criteria established by the UCLA Graduate Division require a bachelor’s degree from a regionally accredited institution comparable in standards and content to a bachelor’s degree from the University of California. A scholastic average of B (3.0 on a 4.0 scale) or better—or its equivalent if the letter grade system is not used—is required for the last 60 semester units or last 90 quarter units of undergraduate study and in any post-baccalaureate study. Additional requirements for international students are explained in the Graduate Study chapter. See the Graduate Division admission website. Departments and programs in the school set additional admission requirements. See the GEIS&IS website.

Degree Requirements

Specific degree requirements vary according to the department and program. Refer to Program Requirements for UCLA Graduate Degrees.

Research Centers and Institutes

The centers and institutes outlined below furnish GSE&IS with valuable resources that support school programs and research. See the research centers website.

Black Male Institute

The Black Male Institute (BMI) is a cadre of scholars, practitioners, community members, and policymakers dedicated to improving the educational experiences and life chances of black males. Educational settings are considered to be critical spaces for developing informed action to address black male persistence in schooling, recognizing that the challenges that impact the academic success of black males are manifold, be they economic, social, legal, or health-related.

Center for Improving Child Care Quality

The Center for Improving Child Care Quality (CICCCQ) conducts high-quality, policy-relevant research, with focus on improving the early care and education environments of young children. Utilizing expertise in the areas of child development, professional development, child care quality, attachment, and observational and survey research methodology, CICCCQ conducts basic, applied, and policy-driven research at the local, state, and national levels. CICCCQ takes a collaborative approach to the evaluation process, building relationships with community partners to inform research, practice, and professional development.
Center for Information as Evidence
The Center for Information as Evidence (CIE) serves as an interdisciplinary forum to address the ways in which information objects and systems are created, used, and preserved as legal, administrative, scientific, social, cultural, and historical evidence. CIE is committed to incorporating perspectives from ethnic communities around the world to sustain the diversity within indigenous cultural heritages and broaden methods of information analysis and conservation.

Center for Knowledge Infrastructures
The Center for Knowledge Infrastructures (CKI) conducts research on scientific data practices and policy, scholarly communication, and sociotechnical systems, exploring methods of data collection, innovations in scaling and workflows, and multidisciplinary approaches to complex problems.

Center for International and Development Education
The Center for International and Development Education (CIDE) is a research and action center whose mission is to enhance educational capacity, facilitate human and economic development, and promote cross-cultural exchanges related to international and development education. This is accomplished through a series of publications, research programs, practical initiatives, and networks with existing development and academic institutions.

Center for Research and Innovation in Elementary Education
The Center for Research and Innovation in Elementary Education (CONNECT) links nationally recognized researchers with teachers and administrators at UCLA Lab School and public schools in Southern California to investigate central issues in education. Programs examine children's learning and development from preschool to sixth grade; investigate teaching diverse student populations; encourage exchange of ideas among scholars, practitioners, and policymakers concerned with child development and school reform; and disseminate effective educational approaches and research.

Center for Study of Evaluation/National Center for Research on Evaluation, Standards, and Student Testing
The Center for Study of Evaluation (CSE)/National Center for Research on Evaluation, Standards, and Student Testing (CRESST) is devoted to educational research, development, training, and dissemination. CSE/CRESST supplies leadership to the field in these areas by creating new methodologies for evaluating educational quality, creating new designs for assessing student learning, promoting the sound use of assessment data, setting the national research agenda, and influencing practice.

Center X
Center X offers a unique setting where researchers and practitioners collaborate to design and conduct programs that prepare and support K-12 education professionals committed to social justice, instructional excellence, the integration of research and practice, and caring in low-income urban schools.

Civil Rights Project/Proyecto Derechos Civiles
The Civil Rights Project/Proyecto Derechos Civiles (CRP) is a research center dedicated to creating a new generation of research in social sciences and law on the critical issues of civil rights and equal opportunity for racial and ethnic groups in the U.S. It has commissioned more than 400 studies, published 14 books, been cited in major Supreme Court decisions on affirmative action, and issued numerous reports from authors at universities and research centers across the country.

Digital Cultures Laboratory
The Digital Cultures Laboratory (DCL) offers a unique, people-focused analysis of new technologies as they spread across the world. Faculty members and students examine and discuss the means by which new media technologies impact economics, cultures, politics, labor, and the environment through our collaborations with global partners. They share their insights through digital platforms, monthly blog posts, interviews, consultancies, and collaborative research projects.

Higher Education Research Institute
The Higher Education Research Institute (HERI) conducts research, evaluation, information, policy studies, and research training in postsecondary education. HERI's research program includes the outcomes of postsecondary education, leadership development, institutional transformation, faculty performance, federal and state policy, and educational equity, and houses the Cooperative Institutional Research Program (CIRP), the largest ongoing national study of college students in the U.S.

Institute for Democracy, Education, and Access
The Institute for Democracy, Education, and Access (IDEA) seeks to understand and challenge pervasive racial and social class inequalities in education. In addition to conducting research and policy analysis, IDEA supports educators, public officials, advocates, community activists, and young people as they design, conduct, and use research to make high-quality public schools and successful college participation routine occurrences in all communities. IDEA also studies how research combines with strategic communications and public engagement to promote widespread participation in civic life.

Institute for Immigration, Globalization, and Education
The Institute for Immigration, Globalization, and Education (IGE) conducts multidisciplinary and comparative
research engaging policymakers, practitioners, and institutional leaders. The research serves to inform efforts to expand opportunities, reduce barriers, and improve the wellbeing of diverse, vulnerable, and marginalized students. The work is timely in the context of globalization, which is profoundly changing the developmental contexts, educational trajectories, and life courses of children, adolescents, and young adults.

Paulo Freire Institute
The Paulo Freire Institute (PFI) seeks to gather scholars and critics of Freire’s pedagogy in permanent dialog to foster the advancement of new pedagogical theories and concrete interventions in the real world. PFI brings together research, teaching, and technology while concentrating on five major areas: studies of globalization and education, teacher education, a comparative perspective on Latin American education, the politics of education, and Paulo Freire’s political philosophy and critical pedagogy.

Sudikoff Family Institute for Education and New Media
The Sudikoff Family Institute for Education and New Media utilizes the popular press and other media to disseminate the work of GSE&IS scholars to policymakers, educators, and the general public. Sudikoff Fellows are selected each year from GSE&IS faculty members to enhance awareness of critical issues related to education and information studies by contributing to a variety of media that reach a lay audience, or serve the public interest in some manner.

HENRY SAMUELI SCHOOL OF ENGINEERING AND APPLIED SCIENCE
Jayathi Y. Murthy, Dean
6426 Boelter Hall
310-825-2826
http://engineering.ucla.edu

Founded in 1945, the Henry Samueli School of Engineering and Applied Science (HSSEAS) at UCLA is committed to providing a rigorous hands-on engineering education to undergraduate and graduate students. Recognized internationally as a top program, UCLA Engineering is the birthplace of the Internet and has developed breakthrough technologies in aerospace systems, wireless communication, solar energy, clean water, and much more. As part of a great public university, the school is committed to a core mission of teaching, research, and service.

UCLA Engineering supports dynamic programs in traditional and new disciplines and pursues cutting-edge research in areas such as precision medicine and bioengineering, sustainable and resilient urban design, advanced materials and manufacturing, robotics and cyberphysical systems, computer networking and cybersecurity, artificial intelligence and machine learning, and data management. Partnerships across campus reflect the school’s commitment to a wide range of interdisciplinary activities as well, in healthcare, business, public policy, and more.

Students receive their education through traditional lectures, hands-on experience in laboratories, and assignments that develop real-world problem-solving skills. Additionally, the undergraduate degree curriculum exposes students to the humanities, social sciences, life sciences, and the arts. It also includes a technical breadth requirement, designed to provide students with working knowledge of a technical field outside their major. The school emphasizes that engineers must uphold high ethical standards in creating and managing technology and is committed to training engineers from diverse backgrounds. Opportunities exist for students to gain exposure to entrepreneurship and commercialization of technologies. Undergraduate students are encouraged to participate in industrial internships and academic research. Students are committed to a high standard of achievement and service to society, consistent with the mission of the school and the University.

Departments and Programs
The Henry Samueli School of Engineering and Applied Science has seven departments offering study in aerospace engineering, bioengineering, chemical engineering, civil engineering, computer science, computer science and engineering, electrical engineering, manufacturing engineering, materials engineering, and mechanical engineering. Undergraduate programs in aerospace engineering, bioengineering, chemical engineering, civil engineering, computer science and engineering, electrical engineering, materials engineering, and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET. The computer science and computer science and engineering programs are accredited by the Computing Accreditation Commission of ABET.

For specific programs, see the department information in the Curricula and Courses chapter or refer to the school Announcement available from the Office of Academic and Student Affairs, 6426 Boelter Hall.

Degrees
The UCLA Henry Samueli School of Engineering and Applied Science offers the following degrees and undergraduate minors:

Aerospace Engineering BS, MS, PhD
Bioengineering BS, MS, PhD
Chemical Engineering BS, MS, PhD
Civil Engineering BS, MS, PhD
Computer Science BS, MS, PhD
Computer Science and Engineering BS
Electrical Engineering BS, MS, PhD
Engineering MEngr, online MS, Engr
Engineering—Aerospace online MS
Engineering—Computer Networking online MS
Engineering—Electrical online MS
Engineering—Electronic Materials online MS
Engineering—Integrated Circuits online MS
Engineering—Manufacturing and Design online MS
Engineering—Materials Science online MS
Engineering—Mechanical online MS
Engineering—Signal Processing and Communications online MS
Engineering—Structural Materials online MS
Engineering and Applied Science Graduate Certificate of Specialization
Manufacturing Engineering MS
Materials Engineering BS
Materials Science and Engineering MS, PhD
Mechanical Engineering BS, MS, PhD

Concurrent Degree Program
Computer Science MS/Management MBA

Undergraduate Minors
Bioinformatics
Environmental Engineering

Undergraduate Admission

Applicants for admission to the school must satisfy the University admission requirements as outlined in the Undergraduate Study chapter. Students must apply directly to HSSEAS by selecting one of the majors within the school or the undeclared engineering option. In the selection process many elements are considered, including grades, test scores, and academic preparation. Applicants are accepted at either the freshman or junior level.

Admission as a Freshman

Freshman applicants must satisfy the examination requirement described in the Undergraduate Study chapter and should take required tests by the December test date, since scores are part of the review process. Instruct the testing agencies to send results directly to Undergraduate Admission.

Applicants must submit scores from an approved core test of mathematics, language arts, and writing. This requirement may be satisfied by taking either the ACT with Writing tests, the SAT Reasoning Test (last administered January 2016), or the SAT with Essay test. Applicants to the school are strongly encouraged to also take the following SAT Subject Tests: Mathematics Level 2 and a laboratory science test (Biology E/M, Chemistry, or Physics) that is closely related to the intended major.

Freshman applicants must meet the University subject, scholarship, and examination requirements described on the Undergraduate Admission website.

Credit for Advanced Placement Examinations. Students may fulfill part of the school requirements with credit allowed at the time of admission for College Board Advanced Placement (AP) Examinations with scores of 3, 4, or 5. Students with AP Examination credit may exceed the 213-unit maximum by the amount of this credit. AP Examination credit for freshmen entering in fall quarter 2017 fulfills HSSEAS requirements as indicated on the school AP table.

Students who have completed 36 quarter units after high school graduation at the time of the examination receive no AP Examination credit.

Admission as a Junior

Students who begin their college work at a California community college are expected to remain at the community college to complete the lower-division requirements in chemistry, computer programming, English composition, mathematics, physics, and the recommended engineering courses before transferring to UCLA. Transfer students who have completed the recommended lower-division program in engineering at California community colleges normally can complete the remaining requirements for one of the BS degrees in two to three academic years of full-time study. Students who select certain majors, such as Computer Science and Engineering or Chemical Engineering, may be required to complete additional lower-division courses for the major sequence.

Lower-Division Requirements

Applicants to the school in junior standing should have completed 90 quarter units (60 semester units) in good standing, including the following lower-division minimum subject requirements:

1. Chemistry courses equivalent to Chemistry and Biochemistry 20A, 20B, 20L at UCLA (only Chemistry and Biochemistry 20A is required for the Electrical Engineering major; the Bioengineering and Chemical Engineering curricula also require Chemistry and Biochemistry 30A, 30AL, 30B). The Computer Science and Computer Science and Engineering majors do not require chemistry
2. Mathematics courses equivalent to Mathematics 31A, 31B, 32A, 32B, 33A, 33B at UCLA. The Aerospace Engi-
neering and Mechanical Engineering majors do not require Mathematics 33B
3. Physics courses equivalent to Physics 1A, 1B, 1C, 4AL, 4BL at UCLA, depending on curriculum selected
4. Computer programming: applicants to the Computer Science, Computer Science and Engineering, and Electrical Engineering majors may take any C++, C, or Java course to meet the admission requirement, but to be competitive the applicant must take a C++ course equivalent to Computer Science 31 at UCLA. Applicants to Chemical Engineering may take any C++, C, Java, or MATLAB course to satisfy the admission requirement, but lack of a MATLAB course equivalent to Mechanical and Aerospace Engineering M20 or Civil and Environmental Engineering M20 at UCLA will delay time to graduation. Applicants to all other engineering majors may take any C++, C, Java, or MATLAB course to satisfy the admission requirement, but the MATLAB course equivalent to Mechanical and Aerospace Engineering M20 or Civil and Environmental Engineering M20 is preferred
5. Additional life sciences (4 units), English composition (5 units), and humanities/social sciences courses (total of 16 quarter units minimum) equivalent to HSSEAS general education (GE) courses

Transfer students must also complete a course equivalent to English Composition 3 at UCLA and a second UC-transferable English composition course.

All lower-division requirements should be completed by the end of the spring term prior to anticipated enrollment at UCLA.

Transfer Credit
Students transferring to the school from institutions that offer instruction in engineering subjects in the first two years, particularly California community colleges, may be given credit for certain engineering core requirements.

Many sophomore courses in circuit analysis, strength of materials, and properties of materials may satisfy Civil and Environmental Engineering 108, Electrical Engineering 100, and Materials Science and Engineering 104 requirements respectively. Check with the Office of Academic and Student Affairs, 6426 Boelter Hall.

Undergraduate Degree Requirements
Henry Samueli School of Engineering and Applied Science students must satisfy University requirements, School requirements, and department requirements for the Bachelor of Science degree.

University Requirements
The University of California has two requirements that undergraduate students must satisfy in order to graduate: Entry-Level Writing or English as a Second Language and American History and Institutions. See Degree Requirements in the Undergraduate Study chapter for details.

School Requirements
The Henry Samueli School of Engineering and Applied Science has seven requirements that must be satisfied for the award of the degree.

Unit Requirement
The minimum units allowed for HSSEAS students is between 180 and 185, depending on the program. The maximum allowed is 213 units.

After 213 quarter units, enrollment may not normally be continued in the school without special permission from the associate dean. This regulation does not apply to Departmental Scholars.

Scholarship Requirement
Students must earn at least a C (2.0) grade-point average in all courses taken at any UC campus. In addition, at least a 2.0 grade-point average must be achieved in total upper-division required courses and total upper-division engineering courses. See a counselor in 6426 Boelter Hall for details.

Academic Residence Requirement
Of the last 48 units completed for the BS degree, 36 must be earned in residence in HSSEAS on this campus. No more than 16 of the 36 units may be completed in summer sessions at UCLA.

Writing Requirement
Students must complete the University Entry-Level Writing or English as a Second Language (ESL) requirement prior to completing the school writing requirement.
Students admitted to the school are required to complete a two-term writing requirement—Writing I and Engineering Writing. Both courses must be taken for letter grades, and students must receive grades of C or better (C– grades are not acceptable).

**Writing I.** The Writing I requirement must be satisfied by completing English Composition 3, 3D, 3DS, 3E, or 3SL with a grade of C or better (C– or a Passed grade is not acceptable) by the end of the second year of enrollment.

The Writing I requirement may also be satisfied by (1) scoring 4 or 5 on one of the College Board Advanced Placement Examinations in English, (2) a combination of a score of 720 or better on the SAT Reasoning Test, Writing section (last administered in January 2016) and superior performance on the English Composition 3 Proficiency Examination, (3) completing a course equivalent to English Composition 3 with a grade of C or better (C– or a Passed grade is not acceptable) taken at another institution, or (4) scoring 5, 6, or 7 on an International Baccalaureate Higher Level Examination.

Students whose native language is not English may need to take English Composition 1A, 1B, and 2I before enrolling in a Writing I course. All courses in the sequence must be passed with a grade of C or better (C– or a Passed grade is not acceptable).

**Engineering Writing.** The Engineering Writing requirement is satisfied by selecting one approved engineering writing (EW) course from the HSSEAS writing course list or by selecting one approved Writing II (W) course. The course must be completed with a grade of C or better (C– or a Passed grade is not acceptable). Writing courses are published in the Schedule of Classes.

Writing courses also approved for general education credit may be applied toward the relevant general education foundational area.

**Technical Breadth Requirement**

The technical breadth requirement consists of a set of three courses providing sufficient breadth outside the student’s core program. A list of HSSEAS Faculty Executive Committee-approved technical breadth requirement courses is available in the Office of Academic and Student Affairs, 6426 Boelter Hall, and deviations from that list are subject to approval by the associate dean for Academic and Student Affairs. None of the technical breadth requirement courses selected by students can be used to satisfy other major course requirements.

**Ethics Requirement**

The ethics and professionalism requirement is satisfied by completing one course from Engineering 183EW or 185EW with a grade of C or better (C– or a Passed grade is not acceptable). The course may be applied toward the Engineering Writing requirement.

**General Education Requirements**

General education (GE) is more than a checklist of required courses. It is a program of study that reveals to students the ways that research scholars in the arts, humanities, social sciences, and natural sciences create and evaluate new knowledge, introduces students to the important ideas and themes of human cultures, fosters appreciation for the many perspectives and the diverse voices that may be heard in a democratic society, and develops the intellectual skills that give students the dexterity they need to function in a rapidly changing world.

This entails the ability to make critical and logical assessments of information, both traditional and digital; deliver reasoned and persuasive arguments; and identify, acquire, and use the knowledge necessary to solve problems.

Students may take one GE course per term on a Passed/Not Passed basis if they are in good academic standing and are enrolled in at least three and one-half courses (14 units) for the term. For details on P/NP grading, see Grading in the Academic Policies chapter or consult the Office of Academic and Student Affairs.

GE courses used to satisfy the engineering writing and/or ethics requirements must be taken for a letter grade.

**FOUNDATIONS OF KNOWLEDGE**

General education courses are grouped into three foundational areas: Foundations of the Arts and Humanities, Foundations of Society and Culture, and Foundations of Scientific Inquiry.

Five courses (24 units minimum) are required. Engineering writing requirement courses also approved for GE credit may be applied toward the relevant GE foundational areas.

Students must meet with a counselor in the Office of Academic and Student Affairs to determine the applicability of GE Cluster courses toward the engineering writing or GE requirements.

Courses listed in more than one category can fulfill GE requirements in only one of the cross-listed categories.

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**HENRY SAMUELI SCHOOL OF ENGINEERING AND APPLIED SCIENCE**

**GENERAL EDUCATION REQUIREMENTS**

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Courses Required</th>
<th>Units Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundations of the Arts and Humanities</td>
<td>2 Courses</td>
<td>10 units</td>
</tr>
<tr>
<td>Literary and Cultural Analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philosophical and Linguistic Analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual and Performance Arts Analysis and Practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Historical Analysis</td>
<td>1 Course</td>
<td>10 units</td>
</tr>
<tr>
<td>Social Analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foundations of Scientific Inquiry</td>
<td>1 Course</td>
<td>4 units</td>
</tr>
<tr>
<td>Life Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total GE</td>
<td>5 Courses</td>
<td>24 Units</td>
</tr>
</tbody>
</table>

Engineering writing requirement courses also approved for GE credit may be applied toward the relevant GE foundational areas.
Foundations of the Arts and Humanities. Two 5-unit courses selected from two different subgroups:

- Literary and Cultural Analysis
- Philosophical and Linguistic Analysis
- Visual and Performance Arts Analysis and Practice

The aim of courses in this area is to supply perspectives and intellectual skills necessary to comprehend and think critically about our situation in the world as human beings. In particular, the courses furnish the basic means to appreciate and evaluate the ongoing efforts of humans to explain, translate, and transform their diverse experiences of the world through such media as language, literature, philosophical systems, images, sounds, and performances. The courses introduce students to the historical development and fundamental intellectual and ethical issues associated with the arts and humanities and may also investigate the complex relations between artistic and humanistic expression and other facets of society and culture.

Foundations of Society and Culture. Two 5-unit courses, one from each subgroup:

- Historical Analysis
- Social Analysis

The aim of courses in this area is to introduce students to the ways in which humans organize, structure, rationalize, and govern their diverse societies and cultures over time. The courses focus on a particular historical question, societal problem, or topic of political and economic concern in an effort to demonstrate how issues are objectified for study, how data is collected and analyzed, and how new understandings of social phenomena are achieved and evaluated.

Foundations of Scientific Inquiry. One course (4 units minimum) from the Life Sciences subgroup or one course from Bioengineering CM145/Chemical Engineering CM145, Chemistry and Biochemistry 153A, or Civil and Environmental Engineering M166/Environmental Health Sciences M166:

- Life Sciences

This requirement is automatically satisfied for Bioengineering and Chemical Engineering majors. The requirement is satisfied for Civil Engineering majors by the natural science requirement.

The aim of courses in this area is to ensure that students gain a fundamental understanding of how scientists formulate and answer questions about the operation of both the physical and biological world. The courses also deal with some of the most important issues, developments, and methodologies in contemporary science, addressing such topics as the origin of the universe, environmental degradation, and the decoding of the human genome. Through lectures, laboratory experiences, writing, and intensive discussions, students consider the important roles played by the laws of physics and chemistry in society, biology, Earth and environmental sciences, and astrophysics and cosmology.

Foundations Course Lists. Creating and maintaining a general education curriculum is a dynamic process; consequently, courses are frequently added to the list. For the most current list of approved courses that satisfy the Foundations of Knowledge GE plan, consult an academic counselor or see the Schedule of Classes.

Intersegmental General Education Transfer Curriculum

Transfer students from California community colleges have the option to fulfill UCLA lower-division GE requirements by completing the Intersegmental General Education Transfer Curriculum (IGETC) prior to transfer. The curriculum consists of a series of subject areas and types of courses which have been agreed on by the University of California and the California community colleges. Although GE or transfer core courses are degree requirements rather than admission requirements, students are advised to fulfill them prior to transfer. The IGETC significantly eases the transfer process, as all UCLA GE requirements are fulfilled when students complete the IGETC courses. Students who select the IGETC must complete it entirely before enrolling at UCLA. Otherwise, they must fulfill the Henry Samueli School of Engineering and Applied Science GE requirements. The school does not accept partial IGETC.

Department Requirements

Henry Samueli School of Engineering and Applied Science departments generally set two types of requirements that must be satisfied for the award of the degree: preparation for the major (lower-division courses) and the major (upper-division courses). Preparation for the major courses should be completed before beginning upper-division work.

Preparation for the Major

A major requires completion of a set of courses known as preparation for the major. Each department sets its own preparation for the major requirements; see the Curricula and Courses chapter of this catalog.

The Major

Students must complete their major with a scholarship average of at least a 2.0 (C) in all courses in order to remain in the major. Each course in the major department must be taken for a letter grade. See the Curricula and Courses chapter of this catalog for details on each major.

Minors and Double Majors

HSSEAS students in good academic standing may be permitted a minor or double major. The minor or second major must be outside the school (e.g., Electrical Engineering major and Economics major). HSSEAS students are not permitted to double major with two school majors (e.g., Chemical Engineering and Civil Engineering). Students may file an Undergraduate Request to Double Major or Add Minor form at the Office of Academic and Student Affairs. The school determines final approval of a minor or double major request; review is done on a case by case basis, and filing the request does NOT guarantee approval. While HSSEAS considers minor or double major requests, specializations are not considered at this time. Students...
interested in a minor or double major should meet with their counselor in 6426 Boelter Hall.

Policies and Regulations
Degree requirements are subject to policies and regulations, including the following:

Student Responsibility
Students should take advantage of academic support resources, but they are ultimately responsible for keeping informed of and complying with the rules, regulations, and policies affecting their academic standing.

Study List
The study list is a record of classes that a student is taking for a particular term. It is the student’s responsibility to present a study list that reflects satisfactory progress toward the degree. Study lists or programs of study that do not comply with the standards set by the faculty may result in enforced withdrawal from the University or other academic action. Study lists require approval of the dean of the school or a designated representative.

Undergraduate students in the school are expected to enroll in at least 12 units each term. Students enrolling in less than 12 units must obtain approval by petition to the dean prior to enrollment in courses. The normal program is 16 units per term. Students may not enroll in more than 21 units per term unless an Excess Unit Petition is approved in advance by the dean.

Minimum Progress
Full-time HSSEAS undergraduate students must complete a minimum of 36 units in three consecutive terms in which they are registered.

Credit Limitations
The following credit limitations apply to all undergraduate students enrolled in the school:

Advanced Placement Examinations. Some portions of Advanced Placement (AP) Examination credit are evaluated by corresponding UCLA course number. If students take the equivalent UCLA course, a deduction of UCLA unit credit is made prior to graduation. See the HSSEAS AP table.

College Level Examination Program. Credit earned through the College Level Examination Program (CLEP) may not be applied toward the bachelor's degree.

Foreign Language. No credit is granted toward the bachelor’s degree for college foreign language courses equivalent to quarter levels one and two if the equivalent of level two of the same language was completed with satisfactory grades in high school.

Repetition of Courses
For undergraduate students who repeat a total of 16 units or less, only the most recently earned letter grades and grade points are computed in the grade-point average (GPA). After repeating 16 units, the GPA is based on all letter grades assigned and total units attempted. The grade assigned each time a course is taken is permanently recorded on the transcript.

1. To improve the grade-point average (GPA), students may repeat only those courses in which they receive a grade of C- or lower; NP or U grades may be repeated to gain unit credit. Courses in which a letter grade is received may not be repeated on a P/NP or S/U basis. Courses originally taken on a P/NP or S/U basis may be repeated on the same basis or for a letter grade.

2. Repetition of a course more than once requires the approval of the College or school or the dean of the Graduate Division and is granted only under extraordinary circumstances.

3. Degree credit for a course is given only once, but the grade assigned each time the course is taken is permanently recorded on the transcript.

4. There is no guarantee that in a later term a course can be repeated (such as in cases when a course is deleted or no longer offered). In these cases students should consult with their academic counselor to determine if there is an alternate course that can be taken to satisfy a requirement. The alternate course would NOT count as a repeat of the original course.

Counseling Services
Academic counselors in the Office of Academic and Student Affairs assist students with University procedures and answer questions related to general requirements.

New undergraduate students must have their course of study approved by an academic counselor. After the first term, curricular and career advising is accomplished on a formal basis. Students are assigned a faculty adviser in their particular specialization in their freshman year.

In addition, undergraduate students are assigned, by major, to an academic counselor in the Office of Academic and Student Affairs who provides them with advice regarding general requirements for the degrees and University and school regulations and procedures. It is the students’ responsibility to periodically meet with their academic counselor in the Office of Academic and Student Affairs, as well as with their faculty adviser, to discuss curriculum requirements, programs of study, and any other academic matters of concern.

Students normally follow the curriculum in effect when they enter the school. California community college transfer students may also select the curriculum in the catalog in effect at the time they began their community college work in an engineering program, providing attendance has been continuous since that time.

Students admitted to UCLA in fall quarter 2012 and thereafter use the Degree Audit system, which can be accessed through MyUCLA. Students should contact their academic counselor in 6426 Boelter Hall with any questions.

Students following the 2005-06 through 2011-12 catalog years use the program called Degree Audit Reporting System (DARS) and should contact their academic counselor in 6426 Boelter Hall with any questions.
Undergraduate students following a catalog year prior to 2005-06 and beginning their upper-division major field coursework are advised to meet with their academic counselor in 6426 Boelter Hall to review their degree requirements.

Honors

HSSEAS undergraduate students who achieve scholastic distinction may qualify for the following honors and programs:

Dean’s Honors List

Students following the engineering curricula are eligible to be named to the Dean’s Honors list each term. Minimum requirements are a course load of at least 15 units (12 units of letter grade) with a grade-point average equal to or greater than 3.7. Students are not eligible for the Dean’s Honors List if they receive an Incomplete (I) or Not Passed (NP) grade or repeat a course. Only courses applicable to an undergraduate degree are considered toward eligibility for Dean’s Honors.

Latin Honors

Students who have achieved scholastic distinction may be awarded the bachelor’s degree with honors. To be eligible, students must have completed 90 or more units for a letter grade at the University of California and must have attained a cumulative grade-point average at graduation which places them in the top five percent of the school (GPA of 3.907 or better) for summa cum laude, next five percent (GPA of 3.822 or better) for magna cum laude, and the next 10 percent (GPA of 3.693 or better) for cum laude. The minimum GPAs required are subject to change on an annual basis. Required GPAs in effect in the graduating year determine student eligibility.

Based on grades achieved in upper-division courses applied to a specific HSSEAS degree requirement, engineering students must also have a 3.907 grade-point average for summa cum laude, a 3.822 for magna cum laude, and a 3.693 for cum laude. For all designations of honors, students must have a minimum 3.25 GPA in their major field upper-division courses. Upper-division courses that are not applied to a specific HSSEAS BS degree requirement are excluded from these upper-division averages.

Tau Beta Pi

The UCLA chapter of Tau Beta Pi, the national engineering honor society, encourages high scholarship, supplies volunteer tutors, and offers many services and programs to foster a spirit of liberal culture in engineering colleges.

Departmental Scholar Program

Exceptionally promising juniors or seniors may be nominated as Departmental Scholars to pursue engineering bachelor’s and master’s degree programs simultaneously. Minimum qualifications include the completion of 24 courses (96 quarter units) at UCLA, or the equivalent at a similar institution, the current minimum grade-point average required for honors at graduation, and the requirements in preparation for the major. To obtain both the bachelor’s and master’s degrees, Departmental Scholars fulfill the requirements for each program. Students may not use any one course to fulfill requirements for both degrees.

For details, consult the Office of Academic and Student Affairs in 6426 Boelter Hall well in advance of application dates for admission to graduate standing.

Exceptional Student Admissions Program

The Henry Samueli School of Engineering and Applied Science has an Exceptional Student Admissions Program (ESAP) for outstanding HSSEAS undergraduate who wish to enter the HSSEAS graduate program upon completion of the BS degree. ESAP is an alternative to the Departmental Scholar Program. In contrast to that program, an ESAP admitted student would be an enrolled graduate student and would be eligible for consideration of graduate fellowships and teaching assistant positions if available.

Special Programs

Extracurricular Activities

Students are encouraged to participate in UCLA extracurricular activities, especially those relevant to engineering, such as the student engineering society (the Engineering Society, University of California), student publications, and programs of the technical and professional engineering societies in the Los Angeles area.

The student body takes an active part in shaping policies of the school through elected student representatives on the school’s Faculty Executive Committee.

Women in Engineering

Among HSSEAS students, women make up approximately 23 percent of the undergraduate and graduate enrollment. Today’s opportunities for women in engineering are excellent, as both employers and educators try to change the image of engineering as a males only field. Women engineers are in great demand in all fields of engineering.

The Society of Women Engineers (SWE), recognizing that women in engineering are still a minority, has established a UCLA student chapter that sponsors field trips and engineering-related speakers (often professional women) to introduce the various options available to women engineers. The UCLA chapter of SWE, in conjunction with other Los Angeles schools, also publishes an annual résumé book to aid women students in finding jobs and presents a career day for women high school students.

Continuing Education

Continuing education in engineering is developed and administered by the UCLA Extension (UNEX) Engineering and Technology Department in close cooperation with HSSEAS. The department offers evening classes, short courses, certificate programs, special events, and education and training at the workplace.
Graduate Study

Concurrent Degree Program
A concurrent degree program between HSSEAS and the Anderson Graduate School of Management allows students to earn two master’s degrees simultaneously: the MBA and the MS in Computer Science. Contact the Office of Academic and Student Affairs for details.

Master of Science in Engineering Online Degree
The primary purpose of the Master of Science in Engineering online self-supporting degree program is to enable employed engineers and computer scientists to augment their technical education beyond the Bachelor of Science degree and to enhance their value to the technical organizations in which they are employed.

Master of Engineering Degree
The Master of Engineering (MEngr) degree is granted to graduates of the Engineering Executive Program, a two-year work-study program consisting of graduate-level professional courses in the management of technological enterprises.

Engineer Degree
HSSEAS offers an Engineer (Engr) degree at a level equivalent to completion of preliminaries in the PhD program. The Engineer degree represents considerable advanced training and competence in the engineering field but does not require the research effort involved in a PhD dissertation.

Requirements for the Engineer degree are identical to those of the PhD degree up to and including the oral preliminary examination, except that the Engineer degree is based on coursework. The minimum requirement is 15 (at least nine graduate) courses beyond the bachelor’s degree, with at least six courses in the major field (minimum of four graduate courses) and at least three in each minor field (minimum of two graduate courses in each).

The PhD and Engineer degree programs are administered interchangeably, so that a student in the PhD program may exit with an Engineer degree or pick up the Engineer degree en route to the PhD degree; similarly, a student in the Engineer degree program may continue to the PhD after receiving the Engineer degree. The time spent in either of the two programs may also be applied toward the minimum residence requirement and time limitation for the other program.

Fields of Study
Established fields of study for the PhD are listed below. With the support of an adviser, students may propose any other field of study to their department. Instructions on the definition of acceptable ad hoc fields and procedures for their approval are available in each department office.

Bioengineering Department. Biomedical instrumentation; biomedical signal and image processing; biosystems science and engineering; medical imaging informatics; molecular cellular tissue therapeutics; neuroengineering

Chemical and Biomolecular Engineering Department. Chemical engineering

Civil and Environmental Engineering Department. Civil engineering materials, environmental engineering, geotechnical engineering, hydrology and water resources engineering, structures (structural mechanics and structural/earthquake engineering)

Computer Science Department. Artificial intelligence, computational systems biology, computer network systems, computer science theory, computer system architecture, graphics and vision, information and data management, software systems

Electrical Engineering Department. Circuits and embedded systems, physical and wave electronics, signals and systems

Materials Science and Engineering Department. Ceramics and ceramic processing, electronic and optical materials, structural materials

Mechanical and Aerospace Engineering Department. Applied mathematics (established minor field only), applied plasma physics (minor field only), design, robotics, and manufacturing (DROM), dynamics, fluid mechanics, heat and mass transfer, nano electromechanical/micro electromechanical systems (NEMS/MEMS), structural and solid mechanics, systems and control

Graduate Certificate of Specialization
HSSEAS offers a Certificate of Specialization in all areas, except computer science. Requirements for admission are the same as for the MS degree.

Each graduate certificate program consists of five 100- or 200-series courses, at least two of which must be at the graduate level. No work completed for any previously awarded degree or credential may be applied toward the certificate. Successful completion of a certificate program requires an overall minimum B average in all courses applicable to the certificate. In addition, graduate certificate candidates are required to maintain a minimum B average in 200-series courses used in the certificate program. A minimum of three terms of academic residence is required. The time limitation for completing the requirements of a certificate program is two calendar years. Details regarding the certificate programs may be obtained from each department office.

Courses completed in HSSEAS for a Certificate of Specialization may subsequently be applied toward master’s and/or doctorate degrees.
Admission

In addition to meeting the requirements of the Graduate Division, applicants to the HSSEAS graduate programs are required to take the General Test of the Graduate Record Examination (GRE). Specific information about the GRE may be obtained from the department of interest.

Students entering the Engineer/PhD program normally are expected to have completed the requirements for the master’s degree with at least a 3.25 grade-point average and to have demonstrated creative ability. Check with department of interest for specific GPA requirements. Normally the MS degree is required for admission to the PhD program. Exceptional students, however, can be admitted to the PhD program without having an MS degree.

For information on the proficiency in English requirements for international graduate students, see Graduate Admission in the Graduate Study chapter of this catalog.

To submit a graduate application, see the HSSEAS Graduate Admissions website. From there connect to the site of the preferred department or program and go to the online graduate application.

Graduate Degree Requirements

Graduate degree information is updated annually in Program Requirements for UCLA Graduate Degrees.

Master of Science Degrees

No lower-division courses may be applied toward graduate degrees. In addition, the various departments generally do not allow, for graduate degree credit, courses required of their undergraduate students. Consult the departmental graduate affairs office for more information.

Individual departments within the school may impose certain restrictions on the applicability of other undergraduate courses toward graduate degrees. Consult with the graduate adviser on departmental requirements and restrictions.

Major Fields or Subdisciplines

The MS program focuses on one major field. The major fields and subdisciplines offered at the MS level in most cases parallel those listed below for the PhD program. There are some differences (for example, manufacturing engineering in the Department of Mechanical and Aerospace Engineering is offered only at the MS level). Contact the department concerned regarding possible differences between the MS and PhD fields and subdisciplines. Students are free to propose to the school any other field of study, with the support of their adviser.

Course Requirements

A total of nine courses is required for the MS degrees, including a minimum of five graduate courses. (Some fields require more than five; obtain specific information from the department of interest.) A majority of the total formal course requirement and of the graduate course requirement must consist of courses in HSSEAS. In the thesis plan, seven of the nine courses must be formal courses, including at least four from the 200 series. The remaining two courses may be 598 courses involving work on the thesis. In the comprehensive examination plan, at least five of the nine courses must be in the 200 series; the remaining four courses may be either 200-series graduate or upper-division undergraduate courses. No 500-series courses may be applied toward the comprehensive examination plan requirements.

Thesis Plan

The thesis must either describe some original piece of research that students have done, usually but not necessarily under the supervision of the thesis committee, or else supply a critical exposition of some topic in their major field of study. Students would normally start to plan the thesis at least one year before the award of the MS degree is expected. There is no examination under the thesis plan.

Comprehensive Examination Plan

For information on the comprehensive examination plan for each department, see Program Requirements for UCLA Graduate Degree.

HERB ALPERT SCHOOL OF MUSIC

Judith L. Smith, Dean
2539 Schoenberg Music Building
310-825-4761
http://schoolofmusic.ucla.edu

First of its kind in the UC system, the UCLA Herb Alpert School of Music focuses on scholarship, performance, composition, pedagogy, and understanding music in all its contemporary and historical diversity.

With its three outstanding departments of Ethnomusicology, Music, and Musicology, the Herb Alpert School of Music at UCLA aspires to educate the whole student through productive collaborations between performance and scholarship, a cross-cultural global understanding of the art of music, and preparatory training for a broad range of careers in music after graduation.
Public concerts, lectures, symposia, master classes, and musical theater and opera productions are a hallmark of the school. Each department hosts a calendar of events open to the entire community, enriching the lives of both those on stage and those in the audience, and contributing to the quality of life in the city and beyond.

Schoenberg Music Building includes the Jan Popper Theater (a recital hall) and Schoenberg Hall (the main concert hall), both of which are fully equipped for audio recording. The building also houses the Music Library and Ethnomusicology Archive, as well as numerous classrooms, practice rooms, an orchestra room, band room, choral room, organ studio, ethnomusicology performance rooms, Ethnomusicology Laboratory, Henry Mancini Media Laboratory, World Instrument Collection, and the Thelonius Monk Institute of Jazz Performance.

The Evelyn and Mo Ostin Music Center includes a high-technology recording studio, spaces for rehearsal and teaching, a café and social space for students, and an Internet-based music production center.

Departments and Programs

Students in the Ethnomusicology Department study the performance and context of music-making from a global perspective, including a concentration in jazz studies, and the Music Department offers concentrations in composition, music education, and performance. The Musicology Department offers students a broad understanding of the history and culture of music.

The school is also home to two undergraduate minors. The Music History minor offers undergraduates an overview of music history and the study of music. Students may select from a wide variety of undergraduate courses that range through the history of European and American music. The Music Industry minor introduces students to critical perspectives on the formative effects the music industry and music technology have on musical practices around the world.

Information regarding academic programs is available from the Office of Student Services and Enrollment Management, 1642 Schoenberg Music Building.

Teaching Credentials

Students interested in obtaining instructional credentials for California elementary and secondary schools should contact the Teacher Education Program, 1009 Moore Hall.

Degrees

The Herb Alpert School of Music offers the following degrees and undergraduate minors:
Ethnomusicology BA, MA, CPhil, PhD
Music BA, MA, MM, CPhil, DMA, PhD
Music History BA
Musicology MA, CPhil, PhD

Undergraduate Minors

Music History

Music Industry

Undergraduate Admission

In addition to the University of California undergraduate application, some departments in the Herb Alpert School of Music require auditions, portfolios, or evidence of creativity. Information regarding departmental requirements is available on each department website; see the school undergraduate admission web page. After the UC application has been filed, applicants may need to submit supplemental application material and should consult the individual department website for details.

Undergraduate Degree Requirements

Herb Alpert School of Music students must satisfy University requirements, School requirements, and department requirements for the Bachelor of Arts degree.

University Requirements

The University of California has two requirements that undergraduate students must satisfy in order to graduate: Entry-Level Writing or English as a Second Language and American History and Institutions. See Degree Requirements in the Undergraduate Study chapter for details.

Herb Alpert School of Music students enrolled in English Composition 1A, 1B, and 2I must take each course for a letter grade.

School Requirements

The Herb Alpert School of Music has eight requirements that must be satisfied for the award of the degree.

Unit Requirement

Students must complete for credit, with a passing grade, no less than 180 units and no more than 216 units, of which at least 60 units must be upper-division courses (numbered 100 through 199). Credit for upper-division tutorials numbered 195 through 199 is limited to a maximum of 24 units total for a letter grade, 8 of which may be applied toward the major.

Scholarship Requirement

A 2.0 (C) average is required in all work attempted at the University of California, exclusive of courses in UCLA Extension and those graded Passed/Not Passed. A 2.0 (C) average is also required in all upper-division courses in the major taken at the University, as well as in all courses applied toward the general education and University requirements.

Academic Residence Requirement

Students are in residence while enrolled and attending classes at UCLA as a major in the Herb Alpert School of Music. Of the last 45 units completed for the bachelor's degree, 35 must be earned in residence in the school. No more than 18 of the 35 units may be completed in UCLA summer sessions.
Courses offered by UCLA Extension may not be applied toward any part of the residence requirements.

Writing Requirement

Students must complete the University’s Entry-Level Writing or English as a Second Language (ESL) requirement prior to completing the school writing requirement.

Students admitted to the school are required to complete a two-term writing requirement—Writing I and Writing II. The courses must be taken for letter grades, and students must receive grades of C or better (C– grades are not acceptable).

Writing I. The Writing I requirement must be satisfied within the first three terms of enrollment by completing English Composition 3 or one of the College Board Advanced Placement Examinations in English, (2) a combination of a score of 720 or better on the SAT Reasoning Test, Writing section (last administered in January 2016) and superior performance on the English Composition 3 Proficiency Examination, (3) completing a course equivalent to English Composition 3 with a grade of C or better (C– or a Passed grade is not acceptable) taken at another institution, or (4) scoring 5, 6, or 7 on an International Baccalaureate Higher Level Examination.

Students whose native language is not English may need to take English Composition 1A, 1B, and 2I before enrolling in a Writing I course. All courses in the sequence must be passed with a grade of C or better (C– or a Passed grade is not acceptable).

Writing II. The Writing II requirement must be satisfied within the first seven terms of enrollment by completing one course from a faculty-approved list of Writing II courses published on the Registrar’s Writing II requirement web page and available on the student Degree Audit. The course must be completed with a grade of C or better (C– or a Passed grade is not acceptable).

Applicable Writing II courses may also fulfill preparation for the major or minor requirements and, if approved for general education (GE) credit, may fulfill a GE requirement.

Transfer students with 90 or more units who have completed the Intersegmental General Education Transfer Curriculum (IGETC) will have satisfied the Writing I, Writing II, and reciprocity requirements. No transfer student is admitted to the school without completing, with a grade of C or better (C– grade is not acceptable), a college-level writing course that Undergraduate Admission accepts as equivalent to English Composition 3.

Quantitative Reasoning Requirement

In the Herb Alpert School of Music, students must demonstrate basic skills in quantitative reasoning. The requirement may be satisfied by completing one approved UCLA course (see list below) for a letter grade of C or better or a C– or a Not Passed grade is not acceptable.

The quantitative reasoning requirement may also be satisfied by achieving an SAT Reasoning Test Mathematics section score of 600 or better for exams taken January 2016 or earlier, or achieving an SAT Mathematics section score of 620 or better for exams taken March 2016 or later, or an SAT Subject Test in Mathematics score of 550 or better.

If approved for general education (GE) credit, applicable courses may also fulfill a GE requirement.

Approved courses include

- Biostatistics 100A, 100B
- Life Sciences 20, 30A
- Mathematics 2 (or any higher-number course except 19, 71SL, 72SL, 89, 89HC, 98XA, 98XB, 99, 103A-103B-103C, 105A-105B-105C, 189, 189HC, 195, 197, 199)
- Philosophy 31
- Political Science 6, 6R
- Program in Computing 10A, 10B, 10C
- Statistics 10, 12, 13

Foreign Language Requirement

Students may meet the foreign language requirement by (1) scoring 3, 4, or 5 on the College Board Advanced Placement (AP) foreign language examination in Chinese, French, German, Italian, Japanese, or Spanish, or scoring 4 or 5 on the AP foreign language examination in Latin, (2) presenting a UCLA foreign language proficiency examination score indicating competency through level three, or (3) completing one college-level foreign language course equivalent to level three or above or American Sign Language 1, 2, and 3, or 8 at UCLA with a grade of C or
Passed or better. The foreign language requirement must be completed within the first six terms of enrollment.

International students may petition to use an advanced course in their native language for this requirement. Students whose entire secondary education has been completed in a language other than English may petition to be exempt from the foreign language requirement.

Transfer students with 90 or more units who have completed the Intersegmental General Education Transfer Curriculum (IGETC) will have satisfied the foreign language and reciprocity requirements.

The Registrar’s Foreign Language Requirement web page publishes courses that may be used to fulfill this requirement.

**Diversity Requirement**

The diversity requirement is predicated on the notion that students in music must be trained to understand the local, national, and global realities in which they make, understand, interpret, and teach music. Those realities include the multicultural, transnational, and global nature of contemporary society. To satisfy the requirement, students must complete one course from the faculty-approved list of diversity courses (available online, through degree audits, or in the Office of Student Services and Enrollment Management). The course must be taken for a letter grade, and students must receive a grade of C or better (C− or a Passed grade is not acceptable).

Applicable courses may also fulfill major, minor, or elective requirements and, if approved for general education (GE) credit, may fulfill a GE requirement. As such, students are not required to complete an additional course to satisfy the diversity requirement.

**General Education Requirements**

General education (GE) is more than a checklist of required courses. It is a program of study that reveals to students the ways that research scholars in the arts, humanities, social sciences, and natural sciences create and evaluate new knowledge, introduces students to the important ideas and themes of human cultures, fosters appreciation for the many perspectives and the diverse voices that may be heard in a democratic society, and develops the intellectual skills that give students the dexterity they need to function in a rapidly changing world.

This entails the ability to make critical and logical assessments of information, both traditional and digital; deliver reasoned and persuasive arguments; and identify, acquire, and use the knowledge necessary to solve problems.

**FOUNDATIONS OF KNOWLEDGE**

General education courses are grouped into three foundational areas: Foundations of the Arts and Humanities, Foundations of Society and Culture, and Foundations of Scientific Inquiry.

Eight courses (38 units minimum) are required. A Writing II course also approved for general education may be applied toward the relevant general education foundational area.

Students who complete a yearlong GE Cluster series fulfill the Writing II requirement and complete nearly 50 percent of their general education requirements. Students who do not complete the yearlong GE Cluster series must meet with a counselor in the Office of Student Services and Enrollment Management to determine applicable GE credit.

Courses listed in more than one category can fulfill GE requirements in only one of the cross-listed categories.

**Foundations of the Arts and Humanities.** Three 5-unit courses, one from each subgroup. Courses required to satisfy the major or other courses taken in the major field may be used to satisfy this GE requirement:

- Literary and Cultural Analysis
- Philosophical and Linguistic Analysis
- Visual and Performance Arts Analysis and Practice

The aim of courses in this area is to supply perspectives and intellectual skills necessary to comprehend and think critically about our situation in the world as human beings. In particular, the courses furnish the basic means to appreciate and evaluate the ongoing efforts of humans to explain, translate, and transform their diverse experiences of the world through such media as language, literature, philosophical systems, images, sounds, and performances. The courses introduce students to the historical development and fundamental intellectual and ethical issues associated with the arts and humanities and may also investigate the complex relations between artistic and humanistic expression and other facets of society and culture.

**Foundations of Society and Culture.** Three 5-unit courses, one from each subgroup and a third course from either subgroup:

- Historical Analysis
- Social Analysis

The aim of courses in this area is to introduce students to the ways in which humans organize, structure, rationalize, and govern their diverse societies and cultures over time. The courses focus on a particular historical question, societal problem, or topic of political and economic concern in an effort to demonstrate how issues are objectified for study, how data is collected and analyzed, and how new understandings of social phenomena are achieved and evaluated.

**Foundations of Scientific Inquiry.** Two courses from either subgroup. If both courses are selected from the same subgroup, they must be from different departments:

- Life Sciences
- Physical Sciences

The aim of courses in this area is to ensure that students gain a fundamental understanding of how scientists formulate and answer questions about the operation of both the physical and biological world. The courses also deal with some of the most important issues, developments, and methodologies in contemporary science, addressing such topics as the origin of the universe, environmental degradation, and the decoding of the human genome. Through lectures, laboratory experiences, writing, and intensive discussions, students consider the important
roles played by the laws of physics and chemistry in society, biology, Earth and environmental sciences, and astrophysics and cosmology.

Foundations Course Lists. Creating and maintaining a general education curriculum is a dynamic process; consequently, courses are frequently added to the list. For the most current list of approved courses that satisfy the Foundations of Knowledge GE plan, consult an academic counselor or see the Schedule of Classes.

Reciprocity with Other UC Campuses
Students who transfer to UCLA from other UC campuses and have met all GE requirements prior to enrolling at UCLA are not required to complete the Herb Alpert School of Music GE requirements. Written verification from the dean at the other UC campus is required. Verification letters should be sent to the UCLA Herb Alpert School of Music, Office of Student Services and Enrollment Management, Box 957234, Los Angeles, CA 90095-7234.

Intersegmental General Education Transfer Curriculum
Transfer students from California community colleges have the option to fulfill UCLA lower-division GE requirements by completing the Intersegmental General Education Transfer Curriculum (IGETC) prior to transfer. The curriculum consists of a series of subject areas and types of courses which have been agreed on by the University of California and the California community colleges. Although GE or transfer core courses are degree requirements rather than admission requirements, students are advised to fulfill them prior to transfer. The IGETC significantly eases the transfer process, as all UCLA GE requirements are fulfilled when students complete the IGETC courses. Students who select the IGETC must complete it entirely before enrolling at UCLA. Otherwise, they must fulfill the Herb Alpert School of Music GE requirements.

Department Requirements
Herb Alpert School of Music departments generally set two types of requirements that must be satisfied for the award of the degree: preparation for the major (lower-division courses) and the major (upper-division courses). Preparation for the major courses should be completed before beginning upper-division work.

Preparation for the Major
A major requires completion of a set of courses known as preparation for the major. Each department sets its own preparation for the major requirements; see the Curricula and Courses chapter of this catalog.

The Major
A major is composed of at least 36 units and no more than 58 units of upper-division courses.

Students must complete their major with a scholarship average of at least a 2.0 (C) in all courses in order to remain in the major. Each course in the major department must be taken for a letter grade.

As changes in major requirements occur, students are expected to satisfy the new requirements insofar as possible. Hardship cases should be discussed with the department adviser, and petitions for adjustment should be submitted to the dean of the school when necessary.

Minors and Double Majors. Students may petition to be reviewed for a minor and/or double major on an individual basis. It is strongly recommended that students pursuing a minor or double major enroll in 15 to 20 units per term. Contact the Office of Student Services and Enrollment Management for an outline of criteria required.

Policies and Regulations
Degree requirements are subject to policies and regulations, including the following:

Student Responsibility
Students should take advantage of academic support resources, but they are ultimately responsible for keeping informed of and complying with the rules, regulations, and policies affecting their academic standing.

Study List
Each term the student study list must include from 15 to 20 units. The school has no provision for part-time enrollment. After the first term, students may petition to carry more than 20 units if they have an overall grade-point average of 3.0 (B) or better and have attained at least a B average in the preceding term with all courses passed. Contact the Office of Student Services and Enrollment Management no later than the end of the second week of instruction.
Minimum Progress
Students are expected to complete satisfactorily at least 40 units during any three consecutive terms in residence; they are placed on probation if they fail to pass these units. They are subject to disqualification if they fail to pass at least 32 units in three consecutive regular terms in residence.

Changing a Major
Students in good academic standing who wish to change their major may petition to do so, provided they can complete the new major within the 216-unit limit and normal time to degree (12 terms for students who entered as freshmen; six terms for students who entered as transfer). Petitions must be submitted to and approved by the department or committee in charge of the new major. Admission to certain majors may be closed or restricted; changes are normally not permitted if students are on probation or have begun their last term.

Concurrent Enrollment
Enrollment at a non-UC institution or at UCLA Extension while enrolled at UCLA is not permitted.

Credit Limitations
The following credit limitations apply to all undergraduates enrolled in the school:

Advanced Placement Examinations. Credit earned through the College Board Advanced Placement (AP) Examinations may be applied toward certain University/school requirements. Consult a counselor in the Office of Student Services and Enrollment Management to determine applicable credit. Portions of AP Examination credit may be evaluated by corresponding UCLA course numbers (e.g., French 4). If students take the equivalent UCLA course, unit credit for such duplication is deducted before graduation. See the school AP table for UCLA course equivalents and credit allowed for GE requirements.

Graduate Courses. Undergraduate students who wish to take courses numbered in the 200 series for credit toward a specific degree requirement must petition for advance approval of the department chair and the dean of the school and must meet the specific qualifications. Courses numbered in the 400 and 500 series may not be applied toward the degree.

Counseling Services
The Herb Alpert School of Music offers advising, program planning in the major and general education requirements, and individual meetings with school and departmental counselors. For counseling information, contact the Office of Student Services and Enrollment Management, 1642 Schoenberg Music Building, 310-267-5536.

Honors
Herb Alpert School of Music undergraduate students who achieve scholastic distinction may qualify for the following honors and programs:

Dean's Honors
To receive Dean's Honors, students must have at least 12 graded units per term with a grade-point average of 3.8 for less than 16 units of work (3.7 GPA for 16 or more units). The honor is posted on the transcript for the appropriate term. Students are not eligible for Dean's Honors in any given term if they receive an Incomplete or a Not Passed (NP) grade, change a grade, or repeat a course.

Latin Honors
Latin Honors are awarded at graduation to students with superior grade-point averages. To be eligible, students must have completed 90 or more units for a letter grade at the University of California. The levels of honors are summa cum laude, magna cum laude, and cum laude. The minimum GPAs required are subject to change on an annual basis. Required GPAs in effect in the graduating year determine student eligibility. Contact the Office of Student Services and Enrollment Management or see the Registrar's honors web page for the most current calculations of Latin honors.

Graduate Study
The advanced degree programs offered in the Herb Alpert School of Music offer graduate students unique research opportunities when combined with special resources, such as the Young Research Library, the special collections of the Music Library, and the University’s performance halls.

Degree Requirements
Requirements to fulfill each degree objective vary according to the degree and the department. For complete degree requirements, see Program Requirements for UCLA Graduate Degrees.
In today’s rapidly changing global marketplace, it is essential that professional managers be conversant with the latest concepts and principles of management. At the John E. Anderson Graduate School of Management at UCLA, which is consistently ranked among the best such schools in the nation, students prepare to become first-rate managers with both specialized skills and a broad understanding of the general economic, business, and managerial environment. This background enables them to become effective and efficient directors of organizations and people whether they are in the private, public, or not-for-profit sector.

Specifically, the Anderson Graduate School of Management offers the business community a wide range of higher education programs that furnish state-of-the-art information in a variety of fields. Through its faculty, the school advances the art and science of management by engaging in fundamental and cutting-edge research in all fields of management and by educating scholars who can continue to create this new knowledge.

Students come from diverse professional and educational backgrounds and seek equally diverse personal and professional goals. Whether they pursue the professional MBA or a PhD in Management, they graduate with a broad understanding of people and organizations and with a sound technical background in the economic and mathematical concepts of management planning and decision making.

The school offers a variety of programs leading to graduate degrees at the master’s and doctorate levels. These include a professional Master of Business Administration (MBA), Master of Science in Business Analytics (MS), and a Master of Financial Engineering (MFE), as well as an Executive MBA Program designed for working managers who are moving from specialized areas into general management and a three-year Fully Employed MBA Program for emerging managers. The school also offers a dual Global Executive MBA degree with the National University of Singapore (NUS) Business School that prepares participants for top positions in organizations around the world. A PhD in Management is also offered, as are a certificate Executive Program and research conferences and seminars for experienced managers.

The school offers an undergraduate minor in Accounting. It also offers an interdisciplinary minor in Entrepreneurship in conjunction with the College of Letters and Science, designed for students interested in new business ventures, business development, and entrepreneurial ideas; see the Entrepreneurship minor for details. Several undergraduate courses in management are also offered. Enrollment in these courses, although open to all University students who have completed the requisites, is limited.

Degrees and Programs
The John E. Anderson Graduate School of Management offers the following degrees and undergraduate minors:

- Master of Business Administration MBA
- Executive Master of Business Administration EMBA
- Fully Employed Master of Business Administration FEMBA
- Global Executive MBA for Asia Pacific GEMBA—dual degree program with National University of Singapore
- Business Analytics MS
- Management MS, CPhil, PhD
- Master of Financial Engineering MFE

Concurrent Degree Programs
- Management MBA/Computer Science MS
- Management MBA/Dentistry DDS
- Management MBA/Latin American Studies MA
- Management MBA/Law JD
- Management MBA/Library and Information Science MLIS
- Management MBA/Medicine MD
- Management MBA/Nursing MSN
- Management MBA/Public Health MPH
- Management MBA/Public Policy MPP
- Management MBA/Urban and Regional Planning MURP

Undergraduate Minors
- Accounting
- Entrepreneurship

UCLA Anderson Executive Education
Founded in 1954, UCLA Anderson Executive Education offers innovative learning solutions that focus on leadership, management, and strategy to meet the unique business objectives of individual executives and leading organizations worldwide. More than 50 custom and open
Research Centers

Eight interdisciplinary research centers supply valuable resources that support school programs: Center for Global Management (CGM); Center for Management of Enterprise in Media, Entertainment, and Sports (MEMES); Easton Technology Management Center; Harold and Pauline Price Center for Entrepreneurship and Innovation; Laurence D. and Lori W. Fink Center for Finance and Investments; Morrison Center for Marketing and Data Analytics; UCLA Anderson Forecast; and UCLA Ziman Center for Real Estate.

Outreach Programs

A wide range of outreach programs, such as the Applied Management Research Program (AMR), Global Access Program (GAP), Entrepreneurship Bootcamp for Veterans with Disabilities, Leaders in Sustainability Certificate Program, Management Development for Entrepreneurs (MDE), and Riordan Programs, offer many teaching, research, and service resources to UCLA, the city, and beyond.

JONATHAN AND KARIN FIELDING SCHOOL OF PUBLIC HEALTH

S. Jody Heymann, Dean
16-035 Center for Health Sciences
310-825-5524
info@ph.ucla.edu
http://ph.ucla.edu

This is an exciting time to study public health. The field is experiencing an unprecedented level of attention as the nation continues to better prepare itself for a variety of threats to its health and security. As a result, many new and exciting opportunities exist for students, faculty members, and graduates.

The field of public health strives to create healthier communities. Where medicine treats the individual, public health looks to the larger community. Those working in public health focus on efforts to assess the health of people and their environments and develop policies and programs to protect people and help them lead healthier lives.

To achieve these goals, public health crosses many of the traditional academic disciplinary boundaries, drawing from medicine, law, public policy, economics, and biology to name a few. Making water safe to drink and air safe to breathe, controlling toxic waste, halting the spread of infectious disease, promoting the advantages of healthy lifestyles, and minimizing violence in our communities are all examples of public health in action. Increasingly public health is called on to help determine which clinical approaches to an individual health problem are best (outcomes research), and to assess and identify disparities in access to health care, quality of health care, and health status.

The Jonathan and Karin Fielding School of Public Health at UCLA is among the top public health schools in the country and offers superior public health training and real-world experience. The school’s classrooms and laboratories are under the same roof as the UCLA medical, dental, and nursing schools and just steps away from its science facilities and schools of engineering, law, management, and public affairs.

The school is enriched by its location in Los Angeles, where a melting pot of cultures, industries, environmental situations, and urban issues offers unparalleled opportunities for research, teaching, and service. Its location also supplies students and faculty members with a unique opportunity to be involved with cutting-edge healthcare issues, as many of the health system changes have origins in Southern California.

Students can look forward to working with acclaimed public health experts and innovators. Among its 250 faculty members are more than 15 members of the prestigious Institute of Medicine, three past presidents of the American Public Health Association, and two past presidents of the International Epidemiological Association.

The school’s 573 students are among the most talented and promising in the nation and are a culturally diverse group—one of the most diverse of all schools of public health—representing more than 23 countries and nearly every region of the U.S. Graduates continue to make an impressive impact on the field and can be found at the forefront of all major public health efforts.

Departments

The school offers graduate programs leading to both academic and professional degrees in five departments. The Department of Biostatistics develops statistical and analytical techniques for public health use. The Department of Community Health Sciences addresses behaviors that prevent disease and enhance health; health problems of high-risk groups (women, children, the aged, the poor, the disadvantaged, and racial and ethnic minorities); health education and promotion; public health policy; community nutrition; and international health. The Department of Environmental Health Sciences elucidates health hazards in the general environment and in the workplace. The Department of Epidemiology is concerned with the nature, extent, and distribution of disease and health in populations. The Department of Health Policy and Management deals with the organization, financing, delivery, quality, and distribution of healthcare services. The school also administers an interdepartmental degree program in molecular toxicology.

See the Curricula and Courses chapter for more information on each department.
Degrees and Programs
The Jonathan and Karin Fielding School of Public Health offers the following degrees and undergraduate minor:

- Biostatistics MS, PhD
- Community Health Sciences MPH-HP, MS, PhD
- Environmental Health Sciences MS, PhD
- Epidemiology MS, PhD
- Health Policy and Management EMPH, MS, PhD
- Molecular Toxicology PhD
- Public Health MPH, DrPH

Articulated Degree Programs
- Public Health MPH/Latin American Studies MA
- Public Health MPH/Medicine MD

Concurrent Degree Programs
- Community Health Sciences MPH/Urban and Regional Planning MURP
- Environmental Health Sciences MPH/Urban and Regional Planning MURP
- Public Health MPH/African Studies MA
- Public Health MPH/Asian American Studies MA
- Public Health MPH/Law JD
- Public Health MPH/Management MBA
- Public Health MPH/Public Policy MPP
- Public Health MPH/Social Welfare MSW

Undergraduate Minor
- Public Health

Admission
Admission criteria established by the UCLA Graduate Division require a bachelor’s degree from a regionally accredited institution comparable in standard and content to a bachelor’s degree from the University of California. A scholastic average of B (3.0 on a 4.0 scale) or better is required—or its equivalent if the letter grade system is not used—for the last 60 semester units or last 90 quarter units of undergraduate study and in any postbaccalaureate study. Additional requirements for international students are explained in the Graduate Study chapter.

Applicants must also submit the application to both the centralized Schools of Public Health Application Service (SOPHAS) and UCLA Graduate Division. For additional admission requirements, see the school application web page.

Degree Requirements
Specific degree requirements vary according to the department and program. Refer to Program Requirements for UCLA Graduate Degrees.

Research Centers
The field of public health addresses a wide range of issues, making it a natural for interdisciplinary collaboration. UCLA faculty members and students reach beyond traditional academic boundaries to promote cooperative exchange across disciplines. The following is a list of interdisciplinary centers sponsored by or associated with the Fielding School of Public Health.

Bixby Center on Population and Reproductive Health
The Bixby Center on Population and Reproductive Health was established in 2001 at the Fielding School of Public Health as the result of a generous gift from the Fred H. Bixby Foundation. The center has grown since then with the support of several additional Bixby Foundation gifts and promotes and supports research, training, and applied public health in the areas of population, reproductive health, and family planning. The principal focus is on reproductive health issues in developing countries, where population growth rates remain high and reproductive health services are poor or inaccessible. The center also works in reproductive health-related issues in the U.S.

Center for Cancer Prevention and Control Research
The Center for Cancer Prevention and Control Research is a joint program of the Fielding School of Public Health and the Geffen School of Medicine's Jonsson Comprehensive Cancer Center. Since its inception in 1976, the center has been recognized throughout the Los Angeles community, nationally, and internationally. It conducts rigorous peer-reviewed research in two major program areas—the Healthy and At-Risk Populations Program and the Patients and Survivors Program.

The Healthy and At-Risk Populations Program focuses on research in primary prevention and screening/early detection among healthy populations and persons at increased risk for developing cancer. The program’s research portfolio includes cancer epidemiology, gene-
Driven by its core public health mission, the Center for Global Infectious Diseases can be identified and controlled before they become pandemics. They can be identified and controlled before they become detectable, so that infectious diseases and to develop the tools that will enable understanding of these processes paves the way not only for targeted drug therapies, but also for targeted public health efforts to reduce environmental exposures in high-risk populations. Environmental genomics helps prevent diseases rather than waiting to cure them once they have occurred.

Center for Environmental Genomics

The Center for Environmental Genomics was established in May 2003 in partnership with the Jonsson Comprehensive Cancer Center. The goal of the center is to bring together experts from a variety of fields, including cancer, environmental health, epidemiology, biostatistics, human genetics, pathology, and pharmacology, to investigate the molecular mechanisms by which environmental agents such as air pollutants and radiation interact with genetic predisposing factors to cause disease. A better understanding of these processes paves the way not only for targeted drug therapies, but also for targeted public health efforts to reduce environmental exposures in high-risk populations. Environmental genomics helps prevent diseases rather than waiting to cure them once they have occurred.

Center for Global and Immigrant Health

The UCLA Center for Global and Immigrant Health was established in 2008 and includes faculty members from all the departments in the School of Public Health, as well as the Schools of Medicine, Dentistry, and Nursing and the California Center for Population Research, all of whom have research or teaching interests in global and/or immigrant health. Participating faculty members have active research collaborations in more than 50 countries throughout the world, and several work both with immigrant communities in California and in the countries of origin of these communities. The center offers a regular seminar series and the Global Health Certificate available to students in any UCLA degree-granting graduate and professional programs.

Center for Global Infectious Diseases

Infectious diseases are a significant cause of death worldwide and a cause of concern in the U.S. One of the greatest challenges in public health and medicine is to understand the environmental and genetic factors that contribute to the emergence and re-emergence of infectious diseases and to develop the tools that will enable detecting and monitoring of how diseases spread, so that they can be identified and controlled before they become pandemics.

Driven by its core public health mission, the Center for Global Infectious Diseases is an intellectual collection of individuals who provide a home for sustaining and expanding research evaluating how infectious diseases evolve and how their spread can be forecast and in turn mitigated or prevented. In addition to those involved in infectious disease epidemiology and control from within public health, the center brings together an interdisciplinary group of faculty members from across the campus, including those who study microbiology, virology, immunology, molecular genetics, ecology, and the evolution of infectious diseases.

Center for Health Advancement

The UCLA Center for Health Advancement supplies enhanced analysis and evidence-based information to help policymakers decide which policies and programs can best improve health and reduce health disparities. The center analyzes a wide range of timely health improvement opportunities, identifying those supported by strong evidence. It presents and disseminates the results of these analyses in plain language to those who make and influence public- and private-sector policies and programs, and offers training and technical assistance to facilitate implementation of recommended approaches. The center brings together faculty from multiple departments of the Fielding School of Public Health and other UCLA schools with a wide range of subject matter and methodological expertise, including expertise in non-health sectors, such as education, transportation, housing, environmental protection, community planning, agriculture, public welfare, and economics. It has strong collaborations with governmental public health agencies, foundations, academic institutions, and other not-for-profit organizations. Within the health sector, its work is focused on how alternative investments to wasteful expenditures in healthcare can yield greater returns.

Center for Health Policy Research

The UCLA Center for Health Policy Research was established in 1994 to apply the expertise of UCLA faculty members and researchers to meet national, state, and local community needs for health policy-related research and information and to accomplish three missions: to conduct research on national, state, and local health policy issues; to offer public service to policymakers and community leaders; and to offer educational opportunities for graduate students and postdoctoral fellows.

Sponsored by the Fielding School of Public Health and the Luskin School of Public Affairs, the center offers a collaborative health policy research environment for the leading professional schools and academic departments of UCLA. One major project is the California Health Interview Survey (CHIS), one of the largest health surveys in the nation. The center also sponsors major public service programs supported by extramural grants.

Center for Healthier Children, Families, and Communities

The Center for Healthier Children, Families, and Communities (CHCFC) was established at UCLA in 1995 to address some of the most challenging health and social problems facing children and families. The center's mission is to improve society's ability to provide children with the best opportunities for health, well-being, and the chance to assume productive roles within families and communities.

Through a unique interdisciplinary partnership—between UCLA departments including Psychology; schools including Education, Law, Medicine, Nursing, Public Affairs, and
Public Health; and providers, community agencies, and affiliated institutions—a critical mass of expertise has been assembled. This allows CHCFC to conduct activities in five major areas: child health and social services; applied research; health and social service provider training; public policy research and analysis; and technical assistance and support to community providers, agencies, and policymakers.

Center for Occupational and Environmental Health
The California State Legislature mandated that the Center for Occupational and Environmental Health (COEH) be formed in 1978, when a group of chemical workers became sterile from exposure to the pesticide DBCP, a known carcinogen and reproductive toxin. With branches in the north and south of the state, COEH trains occupational and environmental health professionals and scientists, conducts research, and offers services through consultation, education, and outreach. The centers constitute the first state-supported institutions to develop new occupational and environmental health leadership in the U.S.
The COEH branch at UCLA is housed in the Center for Health Sciences and involves the Schools of Public Health, Medicine, and Nursing. Specific COEH programs within the Fielding School of Public Health include environmental chemistry, occupational/environmental epidemiology, occupational/environmental medicine, occupational ergonomics, occupational hygiene, toxicology, gene-environment interactions, psychosocial factors in the work environment, occupational health education, and pollution prevention.

Center for Public Health and Disasters
The Center for Public Health and Disasters was established in 1997 to address the critical issues faced when a disaster impacts a community. The center promotes interdisciplinary efforts to reduce the health impacts of domestic, international, natural, and human-induced disasters. It facilitates dialog between public health and medicine, engineering, physical and social sciences, and emergency management. This unique philosophy is applied to the education and training of practitioners and researchers, collaborative interdisciplinary research, and service to the community. The multidisciplinary center staff and participating faculty members have backgrounds that include emergency medicine, environmental health sciences, epidemiology, gerontology, health services, social work, sociology, urban planning, and public health.
The center is one of 15 Academic Centers for Public Health Preparedness funded by the Centers for Disease Control. The goal of these national centers is to improve competencies of front-line workers in public health to respond to public health threats.

Global Media Center for Social Impact
The Fielding School of Public Health has established an innovative new center to increase awareness of important health issues and improve the well-being of people throughout the world by harnessing the storytelling power of television, film, music, and new media.

By collaborating with the entertainment industry and news media, the Global Media Center for Social Impact (GMI) helps content creators and reporters craft compelling stories that accurately address a full range of public health issues—from the social determinants of health to climate change and early childhood health—with the goal of impacting global health.
The center is ideally poised to engage the entertainment industry in creating storylines by linking filmmakers, writers, and other industry types with the experts and extensive resources of the school. The center also collaborates with media organizations and producers around the globe to promote exceptional storytelling, effective reporting, and interactive new media content that can help move research on population health from evidence to impact.

UCLA Kaiser Permanente Center for Health Equity
Academic studies and current events have converged to highlight the magnitude of potentially preventable health disparities among various population groups, and the urgency of addressing these disparities. The UCLA Kaiser Permanente Center for Health Equity identifies, investigates, and addresses these differences in health status and disease burden. A key feature of the center is its heavy focus on community-based intervention research to mitigate observed disparities.
The center aims to advance understanding of health disparities across the lifespan and to foster multidisciplinary research to improve the health of underserved communities. With focus on Los Angeles County, the center facilitates community and academic partnerships in research, trains new investigators in health disparities research, and assists community partners in implementing effective programs and advocating for effective policies to reduce disparities. The center also endeavors to erode the barriers preventing more effective collaboration with local health departments and other key community partners engaged in the practice of public health. It is a collaborative center without walls that includes associates from academia, government, foundations, and private/nonprofit organizations.

UCLA/RAND Prevention Research Center
The UCLA/RAND Prevention Research Center conducts studies and develops programs to improve the health and well-being of adolescents, with special emphasis on projects that involve parents of adolescents. The center is a partnership of the Fielding School of Public Health, Department of Pediatrics, RAND (a nonpartisan, private, nonprofit research institute that conducts research to improve public policy), and local communities.
The center’s multidisciplinary faculty and staff members represent the fields of public health, medicine, social and clinical psychology, sociology, economics, political science, anthropology, education, sampling, statistics, and survey design. It is innovative in its approach to commu-
nity service, partnering with ethnically and economically diverse communities in Los Angeles County to identify opportunities for it to offer technical support to community groups for program implementation and assessment. The center also has partnerships with the Los Angeles Unified School District, Los Angeles County Department of Health Services, and other local groups.

World Policy Analysis Center

The World Policy Analysis Center aims to improve the quantity and quality of comparative data available to policymakers, citizens, civil society, and researchers around the world on policies affecting human health, development, well-being, and equity. To date, the research team has gathered detailed information on public policies in all UN member states, including labor laws, poverty reduction policies, education policies, and constitutional rights, with the goals of increasing access to this data and translating research findings into policies and programs at the global, national, and local levels. The center is committed to enhancing global health and public policy research and policy capacity across universities, governments, and international organizations.

MEYER AND RENE LUSKIN SCHOOL OF PUBLIC AFFAIRS

Gary M. Segura, Dean
3250 Public Affairs Building
310-206-8858
http://luskin.ucla.edu

Founded in 1994, the Meyer and Renee Luskin School of Public Affairs at UCLA incorporates best practices in scholarship, research, and teaching in the fields of policy-making, social work, and urban and regional planning. The unique intersection of these disciplines within one school allows for academic cross-collaboration and a graduate education that values perspectives at both the macro-organizational and micro-organizational levels. Graduates of the master’s and doctorate degree programs are well prepared to take leadership roles and effect change as practitioners, researchers, and policymakers in the public, private, and nongovernmental sectors. Faculty members are actively engaged in research that addresses pressing national and regional issues, including immigration, drug policy, prison reform, health care financing, transportation and the environment, national security, economic development, and an aging U.S. and world population.

Departments

The school comprises three academic departments—Public Policy, Social Welfare, and Urban Planning—and faculty members from such diverse disciplines as economics, geography, history, law, management, and political science. The school trains policy professionals, planners, and social workers for public, private, and nongovernment service; conducts research on significant regional, national, and international issues with a strong interdisciplinary and cross-cultural focus; and acts as a convener and catalyst for public dialogue that engages people locally, nationally, and internationally.

Degrees and Programs

The Meyer and Renee Luskin School of Public Affairs offers the following degrees and undergraduate minors:

- Public Policy MPP
- Social Welfare MSW, PhD
- Urban and Regional Planning MURP
- Urban Planning PhD

Concurrent Degree Programs

- Public Policy MPP/Law JD
- Public Policy MPP/Management MBA
- Public Policy MPP/Medicine MD
- Public Policy MPP/Public Health MPH
- Public Policy MPP/Social Welfare MSW
- Social Welfare MSW/Asian American Studies MA
- Social Welfare MSW/Law JD
- Social Welfare MSW/Public Health MPH
- Urban and Regional Planning MURP/Architecture MArch I
- Urban and Regional Planning MURP/Latin American Studies MA
- Urban and Regional Planning MURP/Law JD
- Urban and Regional Planning MURP/Management MBA
- Urban and Regional Planning MURP/Public Health MPH

Undergraduate Minors

- Gerontology
- Public Affairs
- Urban and Regional Studies

Obtain brochures about the school’s programs from the department offices, 3357 Public Affairs Building, or see the school minors web page.

The school also offers a wide array of undergraduate courses in gerontology, public policy, social welfare, and urban planning. Enrollment in these courses is open to all undergraduate students.

Admission

In addition to requiring that applicants hold a bachelor’s degree from an accredited U.S. institution or an equivalent degree or professional title from an international institution, each department in the school has limitations and additional requirements. Individuals interested in concurrent degrees must be admitted to both programs. Detailed information can be found in Program Requirements for UCLA Graduate Degrees.

For information on the proficiency in English requirements for international graduate students, see Graduate
Admission in the Graduate Study chapter of this catalog.

**Degree Requirements**

Requirements to fulfill each degree objective vary according to the degree and the department. For complete degree requirements, see Program Requirements for UCLA Graduate Degrees.

**Research Centers**

The school houses a number of research centers where faculty members from across the campus pursue issues of mutual interest. In addition to their focus on practical policy problems, the research centers also offer opportunities for student financial aid in the form of research assistant positions, grants, and fellowships.

**Center for Policy Research on Aging**

The Center for Policy Research on Aging (CPRA) was formed to address the significant issues of an aging society through policy analysis, dissemination of information, and technical assistance to the public and private sectors. The demographic challenges of a nation growing older and living longer force us to confront the roles of government and the private sector in serving the increasing number of elderly and their families. The center’s mission is to conduct research, inform policymakers, link communities to local, state, and federal governments, and foster collaboration among UCLA faculty members.

**Institute on Inequality and Democracy**

The Institute on Inequality and Democracy advances radical democracy in an unequal world through research, critical thought, and alliances with social movements and racial justice activism. Faculty members and students analyze and transform the divides and dispossessions of our times, in the University and in our cities.

**Institute of Transportation Studies**

The UCLA Institute of Transportation Studies (ITS), one of the leading transportation policy research centers in the U.S., was created in 1993 to conduct research and furnish professional education on the social, economic, environmental, and cultural aspects of transportation policy. Each year ITS faculty members, students, and research staff collaborate on a wide array of transportation policy and planning studies, ranging from an analysis of the travel trends and transportation needs of immigrants and low-income workers to the testing and evaluation of innovative fare programs to increase public transit use.

**Ralph and Goldy Lewis Center for Regional Policy Studies**

The Lewis Center for Regional Policy Studies was established in 1988 with a $5-million endowment from Ralph and Goldy Lewis to promote the multidisciplinary study, understanding, and solution of regional policy issues in California. Research projects include topics such as welfare reform, immigration, the environment, health insurance, labor and employment, and transportation.

**Luskin Center for Innovation**

The Luskin Center for Innovation serves as a point of intersection and interaction at UCLA, bringing together the brightest minds to concentrate on a specific urgent policy issue in Southern California. Los Angeles is at a critical juncture in many key areas of public policy. UCLA has the intellectual capital to bring together some of the top thinkers in the country, the most enterprising students, and relevant research to support innovative approaches to broad policy problems.

Strategically located within the Luskin School of Public Affairs, the Luskin Center was founded with a generous gift from the Luskins to engage the academic and public decision makers together in actively pursuing solutions to the Los Angeles region’s most urgent threats. The center turns the conventional dividing lines between the academic and practical world into a meeting point—reaching across disciplines, sectors, and political points of view to actively pursue long-term solutions that can immediately be put into practice. The current funding cycle addresses environmental sustainability and pollution reduction in Los Angeles.

**SCHOOL OF THE ARTS AND ARCHITECTURE**

Brett B. Steele, Dean
8260 Broad Art Center
310-206-6465
http://www.arts.ucla.edu

The School of the Arts and Architecture at UCLA plays a vital role in the cultural and artistic life of the campus and community. Courses and degree programs in four departments—Architecture and Urban Design, Art, Design|Media Arts, and World Arts and Cultures/Dance—offer students unparalleled opportunities to learn from faculty members who rank among the most innovative artists, designers, ethnographers, choreographers, architects, and arts scholars of our time.
Combining opportunities for the hands-on study of creative practice with the academic foundation of the liberal arts, the school offers students the chance to develop an integrated and encompassing understanding of human creativity, the arts, and architecture. The mission is to educate, empower, and inspire the next generation of citizens to serve as cultural and artistic leaders of the twenty-first century.

The School of the Arts and Architecture has an impressive array of public arts units, including the Center for the Art of Performance at UCLA, one of the largest and most diverse performing arts presenters in the nation, and two world-class museums—the UCLA Hammer Museum, which focuses on contemporary and emerging artists; and the Fowler Museum at UCLA, which focuses on the traditional and contemporary arts of Africa, the Americas, Asia, and Oceania.

Departments and Programs

The four departments of the school are integral to the rich and varied cultural life of the UCLA campus. The Architecture and Urban Design Department offers students with a unique opportunity to study buildings, cities, and their interdependence in one of the most structurally and ethnically diverse cities in the world. Students in the Art Department learn to understand the broad panorama of the visual arts emphasizing experimentation. The Design|Media Arts Department focuses on electronic and digital imagery in visual communication design. The World Arts and Cultures/Dance Department offers innovative curricula focused on the interdisciplinary and intercultural investigation of performance, the arts, and dance, and on establishing connections between cultural theory and artistic practice.

The school is also home to one undergraduate minor. The Visual and Performing Arts Education minor is designed to introduce arts students to the issues and methodologies in the field of arts education.

Information about academic programs is available from the UCLA School of the Arts and Architecture, Office of Enrollment Management, Box 951427, Los Angeles, CA 90095-1427.

Teaching Credentials

Students interested in obtaining instructional credentials for California elementary and secondary schools should contact the Teacher Education Program, 1009 Moore Hall.

Degrees

The School of the Arts and Architecture offers the following degrees and undergraduate minor:

- Architectural Studies BA
- Architecture MArch I, MArch II, MA, PhD
- Art BA, MFA
- Culture and Performance MA, PhD
- Dance BA, MFA
- Design|Media Arts BA, MFA
- Individual Field BA
- World Arts and Cultures BA

Undergraduate Minor

Visual and Performing Arts Education

Undergraduate Admission

In addition to the University of California undergraduate application, departments in the School of the Arts and Architecture require auditions, portfolios, or evidence of creativity. Information about departmental requirements is available on each department website; see the school undergraduate admissions web page. After the UC application has been filed, applicants must submit supplemental application material and should consult the individual department website for details.

Undergraduate Degree Requirements

School of the Arts and Architecture students must satisfy University requirements, School requirements, and department requirements for the Bachelor of Arts degree.

University Requirements

The University of California has two requirements that undergraduate students must satisfy in order to graduate: Entry-Level Writing or English as a Second Language and American History and Institutions. See Degree Requirements in the Undergraduate Study chapter for details.

School of the Arts and Architecture students enrolled in English Composition 1A, 1B, and 2I must take each course for a letter grade.

School Requirements

The School of the Arts and Architecture has nine requirements that must be satisfied for the award of the degree.
Unit Requirement
Students must complete for credit, with a passing grade, no less than 180 units and no more than 216 units, of which at least 64 units must be upper-division courses (numbered 100 through 199). Credit for upper-division tutorials numbered 195 through 199 is limited to a maximum of 8 units in a single term and a maximum of 32 units total for a letter grade. Each major may have limitations on the number of upper-division tutorials and/or units that may be applied toward degree requirements.

Scholarship Requirement
A 2.0 (C) average is required in all work attempted at the University of California, exclusive of courses in UCLA Extension and those graded Passed/Not Passed. A 2.0 (C) average is also required in all upper-division courses in the major taken at the University, as well as in all courses applied toward the general education and University requirements.

Academic Residence Requirement
Students are in residence while enrolled and attending classes at UCLA as a major in the School of the Arts and Architecture. Of the last 45 units completed for the bachelor's degree, 35 must be earned in residence in the school. No more than 18 of the 35 units may be completed in UCLA Summer Sessions.

Courses offered by UCLA Extension may not be applied toward any part of the residence requirements.

Writing Requirement
Students must complete the University Entry-Level Writing or English as a Second Language (ESL) requirement prior to completing the school writing requirements.

Students admitted to the school are required to complete a two-term writing requirement—Writing I and Writing II. The courses must be taken for letter grades, and students must receive grades of C or better (C– grades are not acceptable).

Writing I. The Writing I requirement must be satisfied within the first three terms of enrollment by completing English Composition 3 or 3SL with a grade of C or better (C– or a Passed grade is not acceptable).

The Writing I requirement may also be satisfied by (1) scoring 4 or 5 on one of the College Board Advanced Placement Examinations in English, (2) a combination of a score of 720 or better on the SAT Reasoning Test, Writing section (last administered in January 2016) and superior performance on the English Composition 3 Proficiency Examination, (3) completing a course equivalent to English Composition 3 with a grade of C or better (C– or a Passed grade is not acceptable) taken at another institution, or (4) scoring 5, 6, or 7 on an International Baccalaureate Higher Level Examination.

Students whose native language is not English may need to take English Composition 1A, 1B, and 2I before enrolling in a Writing I course. All courses in the sequence must be passed with a grade of C or better (C– or a Passed grade is not acceptable).

Writing II. The Writing II requirement must be satisfied within the first six terms of enrollment by completing one course from a faculty-approved list of Writing II courses published on the Registrar's Writing II requirements web page and available on the student Degree Audit. The course must be completed with a grade of C or better (C– or a Passed grade is not acceptable).

A Writing II course also approved for general education may be applied toward the relevant general education foundational area.

Quantitative Reasoning Requirement
In the School of the Arts and Architecture, students must demonstrate basic skills in quantitative reasoning. The requirement may be satisfied by completing one approved UCLA course (see list below) for a letter grade of C or better or Passed, or by achieving an SAT Mathematics section score of 600 or better for exams taken January 2016 or earlier, or by achieving an SAT Mathematics section score of 620 or better for exams taken March 2016 or later, or by achieving a combined PSAT Mathematics score of 550 or better, or by achieving an ACT mathematics exam score of 26 or better.

Approved courses include

- Biostatistics 100A, 100B
- Life Sciences 20, 30A

SCHOOL OF THE ARTS AND ARCHITECTURE DEGREE REQUIREMENTS

University Requirements
1. Entry-Level Writing or English as a Second Language
2. American History and Institutions

School Requirements
1. Unit
2. Scholarship
3. Academic Residence
4. Writing Requirement
   4a. Writing I
   4b. Writing II
5. Quantitative Reasoning
6. Foreign Language
7. Upper-Division Nonmajor Courses
8. Diversity
9. General Education
   9a. Foundations of Arts and Humanities
   9b. Foundations of Society and Culture
   9c. Foundations of Scientific Inquiry

Department Requirements
1. Preparation for the Major
2. The Major

Courses that do not satisfy specific University, school, or department requirements are referred to as electives and can be used to meet the minimum unit requirement for graduation.
Diversity Requirement

The diversity requirement is predicated on the notion that students in the arts must be trained to understand the local, national, and global realities in which they make, understand, interpret, and teach the arts. Those realities include the multicultural, transnational, and global nature of contemporary society. The requirement may be satisfied by taking courses in any of three parts of the students’ overall program: (1) general education courses, (2) courses in the major, or (3) upper-division nonmajor elective courses. As such, students are not required to complete an additional course to satisfy the diversity requirement. Courses satisfying this requirement consider intergroup dynamics along with such social dimensions as race, ethnicity, gender, socioeconomic background, religion, sexual orientation, age, and disability and are relevant to the understanding of these dynamics in contemporary society and culture in the U.S. and around the world.

General Education Requirements

General education (GE) is more than a checklist of required courses. It is a program of study that reveals to students the ways that research scholars in the arts, humanities, social sciences, and natural sciences create and evaluate new knowledge, introduces students to the important ideas and themes of human cultures, fosters appreciation for the many perspectives and the diverse voices that may be heard in a democratic society, and develops the intellectual skills that give students the dexterity they need to function in a rapidly changing world.

This entails the ability to make critical and logical assessments of information, both traditional and digital; deliver reasoned and persuasive arguments; and identify, acquire, and use the knowledge necessary to solve problems.

FOUNDATIONS OF KNOWLEDGE

General education courses are grouped into three foundational areas: Foundations of the Arts and Humanities, Foundations of Society and Culture, and Foundations of Scientific Inquiry.

Eight courses (38 units minimum) are required. A Writing II course also approved for general education may be applied toward the relevant general education foundational area.

Students who complete a yearlong GE Cluster series fulfill the Writing II requirement and complete nearly 50 percent of their general education requirements. Students who do not complete the yearlong GE Cluster series must meet with a counselor in the Student Services Office to determine applicable GE credit.

Courses listed in more than one category can fulfill GE requirements in only one of the cross-listed categories.

Foundations of the Arts and Humanities. Three 5-unit courses, one from each subgroup:

- Literary and Cultural Analysis
- Philosophical and Linguistic Analysis
- Visual and Performance Arts Analysis and Practice

The aim of courses in this area is to supply perspectives and intellectual skills necessary to comprehend and think critically about our situation in the world as human beings. In particular, the courses furnish the basic means to appreciate and evaluate the ongoing efforts of humans to explain, translate, and transform their diverse experiences of the world through such media as language, literature, philosophical systems, images, sounds, and performances. The courses introduce students to the historical development and fundamental intellectual and ethical issues associated with the arts and humanities and may also investigate the complex relations between artistic and humanistic expression and other facets of society and culture.

Foundations of Society and Culture. Three 5-unit courses, one from each subgroup and a third course from either subgroup:
The aim of courses in this area is to introduce students to the ways in which humans organize, structure, rationalize, and govern their diverse societies and cultures over time. The courses focus on a particular historical question, societal problem, or topic of political and economic concern in an effort to demonstrate how issues are objectified for study, how data is collected and analyzed, and how new understandings of social phenomena are achieved and evaluated.

**Foundations of Scientific Inquiry.** Two courses from either subgroup. If both courses are selected from the same subgroup, they must be from different departments:

- Life Sciences
- Physical Sciences

The aim of courses in this area is to ensure that students gain a fundamental understanding of how scientists formulate and answer questions about the operation of both the physical and biological world. The courses also deal with some of the most important issues, developments, and methodologies in contemporary science, addressing such topics as the origin of the universe, environmental degradation, and the decoding of the human genome. Through lectures, laboratory experiences, writing, and intensive discussions, students consider the important roles played by the laws of physics and chemistry in society, biology, Earth and environmental sciences, and astrophysics and cosmology.

**Foundations Course Lists.** Creating and maintaining a general education curriculum is a dynamic process; consequently, courses are frequently added to the list. For the most current list of approved courses that satisfy the Foundations of Knowledge GE plan, consult an academic counselor in the Student Services Office, 2200 Broad Art Center, or see the Schedule of Classes.

**Reciprocity with Other UC Campuses**

Students who transfer to UCLA from other UC campuses and have met all GE requirements prior to enrolling at UCLA are not required to complete the School of the Arts and Architecture GE requirements. Written verification from the dean at the other UC campus is required. Verification letters should be sent to the UCLA School of the Arts and Architecture, Student Services Office, Box 951620, Los Angeles, CA 90095-1620.

**Intersegmental General Education Transfer Curriculum**

Transfer students from California community colleges have the option to fulfill UCLA lower-division GE requirements by completing the Intersegmental General Education Transfer Curriculum (IGETC) prior to transfer. The curriculum consists of a series of subject areas and types of courses which have been agreed on by the University of California and the California community colleges. Although GE or transfer core courses are degree requirements rather than admission requirements, students are advised to fulfill them prior to transfer. The IGETC significantly eases the transfer process, as all UCLA GE requirements are fulfilled when students complete the IGETC courses. Students who select the IGETC must complete it entirely before enrolling at UCLA. Otherwise, they must fulfill the School of the Arts and Architecture GE requirements.

**Department Requirements**

School of the Arts and Architecture departments generally set two types of requirements that must be satisfied for the award of the degree: preparation for the major (lower-division courses) and the major (upper-division courses). Preparation for the major courses should be completed before beginning upper-division work.

**Preparation for the Major**

A major requires completion of a set of courses known as preparation for the major. Each department sets its own preparation for the major requirements; see the Curricula and Courses chapter of this catalog.

**The Major**

A major is composed of no less than 56 units, including at least 36 units of upper-division courses. Students must complete their major with a scholarship average of at least a 2.0 (C) in all courses in order to remain in the major. Each course in the major department must be taken for a letter grade. As changes in major requirements occur, students are expected to satisfy the new requirements insofar as possible. Hardship cases should be discussed with the department adviser, and petitions for adjustment should be submitted to the dean of the school when necessary.
Any department offering a major in the School of the Arts and Architecture may require a general final examination.

Individual Majors. Highly motivated students who believe that no single major accommodates their specific interests and goals may propose designing their own major. Proposals are prepared with faculty guidance and sponsorship and must explain the intent concerning the anticipated program of study and reasons why the academic goals cannot be achieved within an existing major. Proposals must be submitted no later than the end of the sophomore year. Transfer students must complete at least one term of residency at UCLA before proposing an individual major. Students interested in designing an individual major should consult the Director of Student Services, School of the Arts and Architecture, 2200 Broad Art Center.

Minors and Double Majors. Students may petition to be reviewed for a minor and/or double major on an individual basis. It is strongly recommended that students pursuing a minor or double major enroll in 15 to 20 units per term. Contact the Student Services Office for an outline of criteria required.

Policies and Regulations
Degree requirements are subject to policies and regulations, including the following:

Student Responsibility
Students should take advantage of academic support resources, but they are ultimately responsible for keeping informed of and complying with the rules, regulations, and policies affecting their academic standing.

Study List
Each term the student study list must include from 12 to 20 units. The school has no provision for part-time enrollment. After the first term, students may petition to carry more than 20 units if they have an overall grade-point average of 3.0 (B) or better and have attained at least a B average in the preceding term with all courses passed. Consult the Student Services Office no later than the end of the second week of instruction.

Minimum Progress
Students are expected to complete satisfactorily at least 36 units during any three consecutive terms in residence; they are placed on probation if they fail to pass these units. They are subject to dismissal if they fail to pass at least 32 units in three consecutive regular terms in residence.

Changing a Major
Students in good academic standing who wish to change their major may petition to do so, provided they can complete the new major within the 216-unit limit and normal time to degree (12 terms for students who entered as freshmen; six terms for students who entered as transfers). Petitions must be submitted to and approved by the department or committee in charge of the new major. Admission to certain majors may be closed or restricted; changes are normally not permitted if students are on probation or have begun their last term.

Concurrent Enrollment
Enrollment at a non-UC institution or at UCLA Extension while enrolled at UCLA is not permitted.

Credit Limitations
The following credit limitations apply to all undergraduate students enrolled in the school:

Advanced Placement Examinations. Credit earned through the College Board Advanced Placement (AP) Examinations may be applied toward certain University/school requirements. Consult a counselor in the Student Services Office to determine applicable credit. Portions of AP Examination credit may be evaluated by corresponding UCLA course numbers. If students take the equivalent UCLA course, unit credit for such duplication is deducted before graduation. See the school AP table for UCLA course equivalents and credit allowed for GE requirements.

Graduate Courses. Undergraduate students who wish to take courses numbered in the 200 series for credit toward a specific degree requirement must petition for advance approval of the department chair and the dean of the school and must meet the specific qualifications. Courses numbered in the 400 and 500 series may not be applied toward the degree.

Counseling Services
The School of the Arts and Architecture offers advising, program planning in the major and general education requirements, and individual meetings with school and departmental counselors from matriculation through graduation. For counseling information, contact the Student Services Office, 2200 Broad Art Center.

Honors
School of the Arts and Architecture undergraduate students who achieve scholastic distinction may qualify for the following honors and programs:

Dean’s Honors
To receive Dean’s Honors, students must have at least 12 graded units per term with a grade-point average of 3.8 for less than 16 units of work (3.7 GPA for 16 or more units). The honor is posted on the transcript for the appropriate term. Students are not eligible for Dean’s Honors in any given term if they receive an Incomplete or a Not Passed (NP) grade, change a grade, or repeat a course.

Latin Honors
Latin Honors are awarded at graduation to students with superior grade-point averages. To be eligible, students must have completed 90 or more units for a letter grade at the University of California. The levels of honors are summa cum laude, magna cum laude, and cum laude. The minimum GPAs required are subject to change on an annual basis. Required GPAs in effect in the graduating
Departmental Scholar Program

Exceptionally promising juniors or seniors may be nominated as Departmental Scholars to pursue bachelor’s and master’s degree programs simultaneously. Qualifications include completion of 24 courses (96 quarter units) at UCLA or the equivalent at a similar institution and the requirements in preparation for the major. Students must also have at least one term of coursework remaining at UCLA. To obtain both the bachelor’s and master’s degrees students must be provisionally admitted to the Graduate Division, fulfill requirements for each program, and maintain a minimum B average. No course may be used to fulfill requirements for both degrees. Interested students should consult their department well in advance of application dates for graduate admission. Contact the Student Services Office in 2200 Broad Art Center for details.

Graduate Study

The advanced degree programs offered in the School of the Arts and Architecture supply graduate students with unique research opportunities when combined with special resources, such as the Young Research Library, the special collections of the Arts Library, and University exhibit venues.

 Fellowships, grants, and assistantships are available through the departments and the dean of the Graduate Division.

Admission

In addition to requiring that applicants hold a bachelor’s degree from an accredited U.S. institution or an equivalent degree of professional title from an international institution, each department in the school has limitations and additional requirements. In general, samples of creative work (auditions, portfolios, computer programs, etc.) are required. Detailed information is available on individual department websites and in Program Requirements for UCLA Graduate Degrees.

For information on the proficiency in English requirements for international graduate students, see Graduate Admission in the Graduate Study chapter of this catalog.

Degree Requirements

Requirements to fulfill each degree objective vary according to the degree and the department. For complete degree requirements, see Program Requirements for UCLA Graduate Degrees.

Research Centers

Seven interdisciplinary research centers—the Art and Global Health Center, Art | Sci Center, cityLAB, Experimental Technologies Center, Game Lab, Grunwald Center for the Graphic Arts, NOW Institute, and X-LAB—as well as the renowned Murphy Sculpture Garden, are part of the school. All of these offer students the opportunity to broaden and deepen their experience of the arts and architecture while at UCLA.

In addition to providing a rich and diverse environment on campus, the school encourages students to participate in community outreach programs designed around concerts, exhibitions, symposia, and dance productions presented in cooperation with groups throughout the greater Los Angeles area.

SCHOOL OF DENTISTRY

Paul H. Krebsbach, Dean
53-038 Dentistry
310-206-6063
https://www.dentistry.ucla.edu

The School of Dentistry at UCLA has a national and international reputation for its teaching, research activities, and public service that prepare dental students for professional careers dedicated to patient care, leadership, and service. The curriculum prepares students for changes in treatment modalities and healthcare delivery systems. From the moment training begins, students actively participate in preventive and clinical dental care and soon make valuable contributions to the clinical health team. Clinical instruction emphasizes the comprehensive care of patients. Students interact with their colleagues, faculty members, and dental auxiliary personnel in much the same way as they later will interact in a private or group practice.

School of Dentistry students may undertake programs designed to meet their special interests; mandatory electives encourage advanced training in an area of particular interest and service learning. In addition to basic and applied research programs within the school, students participate in community service programs such as the Wilson-Jennings-Bloomfield UCLA Venice Dental Center. The graduate programs and resident specialty programs foster new lines of research that lead to better treatment options. An active continuing education program, directed by UCLA faculty members, offers a variety of hands-on courses for members of the dental profession and their auxiliaries.
Degrees and Programs
The School of Dentistry offers the following degrees:
- Dental Surgery DDS
- Oral Biology MS, PhD

Articulated Degree Programs
- Oral Biology MS/Dentistry DDS
- Oral Biology MS/Dentistry Certificate
- Oral Biology PhD/Dentistry Certificate
- Oral Biology PhD/Dentistry DDS

Concurrent Degree Programs
- Dentistry DDS/Management MBA

In addition, the school has a Professional Program for International Dentists (PPID) and a number of dental specialty residency programs. For information on the MS and PhD programs in Oral Biology, for which admission to the School of Dentistry is not required, see Program Requirements for UCLA Graduate Degrees.

Pre-Dental Curriculum
For details on the three-year pre-dental curriculum, see the Career Center pre-health website.

DDS Degree
The UCLA dental curriculum leading to the degree of Doctor of Dental Surgery (DDS) is based on the quarter system. The course of study usually takes four academic years of approximately nine months each, with three required summer quarters between the first/second, second/third, and third/fourth years. The curriculum is designed to give students experience in all phases of clinical dentistry.

The dental curriculum consists of three principal areas: basic health sciences courses, didactic dental courses, and clinical experience. The first two years of the curriculum are chiefly devoted to didactic, laboratory, and general clinical coursework. The final two years emphasize training and instruction in the clinical fields, including endodontics, fixed prosthodontics, operative dentistry, oral diagnosis and treatment planning, oral radiology, oral and maxillofacial surgery, anesthesiology, orthodontics, pediatric dentistry, periodontics, and removable prosthodontics.

Postgraduate Programs
School of Dentistry opportunities for postgraduate study include a one-year general practice residency program; a one-year advanced education in general dentistry program; a one-year residency in maxillofacial prosthodontics; a six-year oral and maxillofacial surgery residency training program; three-year prosthodontics, periodontics, orthodontics, and dental anesthesiology programs; two-year programs in the specialties of endodontics, oral radiology, and orofacial pain and dysfunction; and a 26-month program in pediatric dentistry.

Information on the postgraduate programs can be obtained by visiting the School of Dentistry website.

SCHOOL OF LAW
Jennifer L. Mnookin, Dean
1242 Law Building
310-825-4841
http://www.law.ucla.edu

By any standard, the School of Law at UCLA is recognized as one of the nation’s great law schools. Each year a lively, talented, and diverse law student population assembles in a rigorous, innovative, and supportive environment. Members of the faculty frequently receive awards for teaching excellence and are highly regarded University-wide and nationally. They also are recognized worldwide for their contributions to scholarship and law reform in a broad spectrum of fascinating fields that dramatically affect our world—constitutional law, environmental law and policy, human rights, criminal law, corporate law, employment law, international law, and intellectual property, to name a few. The structure of our democracy, the underpinnings and regulation of business, families, communities, and individual liberties, the powerless and homeless, the many permutations of a race-conscious society—all are subjects of investigation and study. Faculty members are committed to being intellectually and professionally demanding of students and supportive at the same time, encouraging and fostering a genuine spirit of collaboration and community.

Law students select courses from an intellectually rich curriculum in private or public law and theory. Courses are taught in both traditional and clinical settings, with some offered as part of coordinated concurrent degree programs or specializations in Business Law and Policy, Critical Race Studies, Media, Entertainment, Technology, and Sports Law, International and Comparative Law, Law and Philosophy, and Public Interest Law and Policy. Situated at a major gateway to the Pacific Rim, UCLA is a center of international programs; international and comparative law has become a dynamic, integral part of the law school.
curriculum, with courses addressing the European Union, modern Japan and China, Islam, international trade and business transactions, and a host of other related courses. Part of an outstanding research University, possessed of rich cultural resources, and located in a beautiful garden setting allowing year-round outdoor study and reflection, UCLA's extensive educational programs afford law students myriad interdisciplinary opportunities both in the classroom and through independent research.

The technologically advanced, spacious, and comfortable Hugh and Hazel Darling Law Library—replete with natural lighting and views—houses an extensive collection of legal materials. The school's nationally recognized clinical program offers sophisticated courses that help students develop applied lawyering skills, focus on solving client problems, and see in their education at UCLA more of what ultimately will face them as lawyers and policymakers. One part of the Law Building is designed for clinical teaching and student practice and facilitates work and study in the ever-expanding clinical curriculum, which includes courses in interviewing, counseling, negotiation, business transactions, criminal and civil trial advocacy, community-based lawyering, environmental law, human rights, and international justice. The first-year lawyering skills course, taught by experienced lawyers who are full-time faculty members, is truly outstanding and features interviewing and counseling of clients and drafting of legal memoranda, contracts, and advice letters, thereby developing legal research capabilities and writing prowess.

Successful placement of UCLA law graduates reflects the school's excellent national ranking. Approximately 400 interviewers from across the country visit the campus annually from law firms, corporations, government agencies, and public interest organizations. More than 16,000 UCLA graduates work in coveted positions locally and around the world, not only serving in a wide variety of public and private law practices, but as judges, business executives, journalists, law professors, and academic administrators.

Degrees
The School of Law offers the following degrees:
- Juris Doctor JD
- Master of Laws LLM
- Doctor of Juridical Science SJD

Concurrent Degree Programs
- Law JD/African American Studies MA
- Law JD/American Indian Studies MA
- Law JD/Education MEd, MA, EdD, or PhD
- Law JD/Management MBA
- Law JD/Philosophy PhD
- Law JD/Public Health MPH
- Law JD/Public Policy MPP
- Law JD/Social Welfare MSW

Law JD/Urban and Regional Planning MURP
In addition to the concurrent programs above, students may design a tailored program from other disciplines in the UCLA curriculum or from another high-quality institution; this must be arranged in consultation with the School of Law and the other selected program.

Detailed information about the academic programs offered by the School of Law, course titles and descriptions, fees, and the semester-system calendar by which it operates are available on the JD degrees and specializations web page.

Juris Doctor Degree
The UCLA School of Law has as one of its central purposes the training of attorneys who attain high levels of professional excellence and integrity and who exercise civic responsibility in myriad ways over long careers.

Admission
Students beginning their professional work are admitted only for Fall Semester. They must have received a bachelor's degree from a university or college of approved standing before beginning work in the school and are required to take the Law School Admission Test (LSAT).

The school seeks to admit students of outstanding intellectual ability who bring a wide range of backgrounds, experiences, and perspectives to the classroom and the legal profession. Through long experience the faculty has concluded that the quality of the education of each student is affected in significant ways by the presence of vital diverse viewpoints. Students of all backgrounds choose to come to UCLA in significant part because of the school’s outstanding achievements in creating a highly diverse educational environment.

In evaluating each applicant the school places substantial weight on traditional measures of academic ability, namely grades and LSAT scores. It also recognizes in its evaluation that other factors and attributes contribute greatly to a person’s ability to succeed as a law student and lawyer. When assessing academic promise and achievement, the applicant’s entire file is considered, including letters of recommendation, whether economic, physical, or other challenges have been overcome, scholarly achievements such as graduate study, awards, or publications, and the rigor of the undergraduate educational program.

In addition, the school considers attributes that may contribute to assembling a diverse class. Special emphasis is placed on socioeconomic disadvantage in the evaluation. Also considered are work experience and career achievement, community or public service, career goals (with particular attention to the likelihood of applicants representing underrepresented communities), significant hardships overcome, evidence of and potential for leadership, language ability, unusual life experiences, and any other factors (except those deemed inadmissible by The Regents or by other applicable law) that indicate the applicant may significantly diversify the student body or make a distinctive contribution to the school or the legal profession.
Residence and Unit Requirements
Candidates for the degree of Juris Doctor must pursue resident law study for six semesters and successfully complete 87 units, at least 65 of which must be earned in regularly scheduled law class sessions. The residence requirements may be satisfied as follows: (1) six semesters in regular session in this school or (2) two semesters in regular session (or equivalent) in a school that is accredited by the American Bar Association, coupled with four semesters in regular session (or equivalent) in this school.
Every first-year student must take the full schedule of required courses; second- and third-year students are required to take a minimum of 12 units and may not take more than 16 units each semester. The second- and third-year curriculum is elective, except for a required course in professional responsibility and a substantial analytical writing requirement. In addition to the courses in the regular law school curriculum, students may take two courses for credit in other disciplines within the University. Graduate students may enroll in upper-division law courses on a limited basis. Law courses are not open to non-UCLA students. Auditing of courses is not permitted.

Attendance and Grades
The right to take examinations and the privilege of continuing as a student in the school are conditioned on regular classroom attendance. Information on the grading system, which is based on a letter-grade scale of A+ to F, and standards for satisfactory performance and for graduation may be obtained from the Office of the Assistant Dean for Students.

Curriculum
The school offers courses of instruction within the school and supervised educational experiences outside it in an effort to enable its students to think intelligently and to prepare them for careers of practice and public service. To this end the school employs several instructional techniques in a variety of subject areas.
In the first year of their legal education, students are exposed to an intensive study of legal reasoning in a series of fields that have historically dominated legal thought. Students begin with a pioneering week-long orientation program that immerses them in the fundamentals of the law school learning process. From there they embark on a formative first year that promotes optimal learning with an extensive course on lawyering skills, in addition to the traditional courses on common law and other foundational subjects. The year-long lawyering skills course gives students the opportunity to explore the relationship between legal analysis and lawyering tasks, such as effective legal writing, oral advocacy, and legal research. The course is taught alongside courses that historically have laid the foundation for law of all kinds: civil procedure, constitutional law, contracts, criminal law, and property and torts. In addition, an elective on modes of legal inquiry in the second semester of the first year serves as a gateway to the upper-division curriculum.
In the second and third years students have an opportunity to engage in a number of different fields of law and law-related study. All of the courses in the second- and third-year curriculum are elective, with the exception of the legal profession and substantial analytical writing requirements that are requisites for graduation.

Master of Laws Degree
The School of Law offers a Master of Laws (LLM) degree program for international and domestic law school graduates who wish to pursue a year of graduate legal education. The program allows students to specialize their studies in fields such as entertainment law, international and comparative law, and four separate business law subjects, or to design their own specialization in a field of their choice.

Doctor of Juridical Science Degree
The Doctor of Juridical Science (SJD) degree program is designed for those seeking to pursue careers as teachers and scholars of law. The highly selective program is open only to applicants who possess a distinguished prior academic record in law, show promise of outstanding scholarship, and demonstrate a high potential for completing a scholarly dissertation of required quality. Applicants must hold a JD degree or foreign equivalent and an LLM degree (or be enrolled in a program leading to an LLM degree).

Academic Specializations for JD Degree

Business Law and Policy Specialization
The Business Law and Policy specialization is designed for students who wish to focus their schooling in a particular area of business law and ultimately earn a certificate of completion with their JD degree. Students may choose from five tracks: business law, bankruptcy, mergers and acquisitions, securities regulation, and taxation. Approximately 70 courses and seminars are offered in the specialization. The five tracks are designed to furnish additional guidance to students in course selection, as well as highlight the specialization’s curricular strengths. Business law materials are integrated to varying degrees in the law school’s first-year curriculum, typically in property, contracts, and torts. The second- and third-year curricula in the specialization include courses covering a wide variety of legal and business issues, ranging from regulation of markets to the design of business transactions.

Critical Race Studies Specialization
The UCLA School of Law is the first American law school to offer an advanced curriculum that fosters students’ systematic and rigorous study in the area of critical race studies. With many faculty members who have been instrumental in pioneering and advancing critical race theory, the Critical Race Studies specialization is essential to promoting insightful, intelligent public conversation about race relations. It is appropriate for law students who seek advanced study and/or practice in race and the law, critical race theory, civil rights, public policy, and other legal practice areas that are likely to involve working with racial minority clients and communities or working to combat racial inequality. The course of study emphasizes mastery of five areas: (1) history (centered on the Constitution but focused as well on a variety of other legal docu-
ments and experiences), (2) theory (critical race theory, jurisprudence, and theoretical advances outside the legal academy), (3) comparative subordination (understanding of the multiracial nature of American race relations, as well as how racial inequality is affected by discrimination based on gender, sexual orientation, and disability), (4) doctrine (case and statutory law and its interpretation), and (5) practice (including legal practice, community service, and lawyers’ use of social science inquiries and methods).

**Media, Entertainment, Technology, Sports Law Specialization**

Los Angeles is the center of the entertainment industry, and recognizing the unique ability to offer a specific program in that arena, the school launched the Media, Entertainment, Technology, and Sports Law specialization in 2005. The specialization is the most comprehensive, advanced, and innovative approach to the study of entertainment and media law in the country. Students who fulfill the requirements have a solid grounding in the law, customs, theory, and policy in the motion picture, television, music, and other industries involved in creative and artistic matters. The program also prepares students who choose to work in nonprofit institutions, government, or academia in the area of entertainment, media, and intellectual property law.

**International and Comparative Law Specialization**

The school’s International and Comparative Law Program is one of the best in the nation. An expansive law faculty, course offerings, colloquia and symposia, student-edited journals, externships, foreign exchange offerings, and a broad community of interested students from around the world constitute a rich milieu in which to learn about the field. The International and Comparative Law specialization builds on these strengths and directs students to coursework that may range from international business to comparative constitutional law to international human rights.

**Law and Philosophy Specialization**

The Law and Philosophy specialization is designed for students who want to supplement their legal studies by exploring more theoretical issues concerning the philosophical foundations of law. It is invaluable to students, especially those interested in attending graduate programs or exploring a career in academia. The specialization exposes students to material on the nature of law and legal systems, legal methodologies, and the theoretical underpinnings and justifications of particular doctrinal areas such as constitutional law, criminal law, and contract. Students need not have any prior background in philosophy, but a strong interest in the subject is recommended.

**Public Interest Law and Policy Specialization**

Recognizing the considerable debate about the proper role of the law in creating and sustaining a just society, the Public Interest Law and Policy specialization strives to offer its students with an innovative and intellectually ambitious curriculum that prepares them to engage in sophisticated representation of traditionally underserved clients and interests. The specialization, one of the nation’s top such programs, has a competitive admissions process. Students represent a broad range of political and ideological perspectives and often pursue additional specializations and joint degrees. Graduates have received prestigious public interest law fellowships, and they work in a variety of settings, with focus on an array of social justice issues ranging from immigration, labor, and international human rights to healthcare, welfare and poverty, and civil rights. Faculty members are leaders in their respective fields and have distinguished themselves by the quality of their scholarship and teaching. They represent a broad cross-section of interests on social justice issues and bring to the classroom a depth of knowledge from a wide range of experiences and research perspectives.

**Academic Specializations for LLM Degree**

**Business Law Specialization**

The Business Law specialization is designed to allow students to focus in one of four tracks: business law, bankruptcy, securities regulation, and taxation. Approximately 70 courses and seminars are offered in the specialization. The four tracks are designed to offer guidance to students in course selection, as well as highlight the specialization’s curricular strengths. The advanced curricula in the specialization include courses covering a wide variety of legal and business issues, ranging from regulation of markets to the design of business transactions. The Lowell Milken Institute for Business Law and Policy prepares students for outstanding careers and leadership in business law as well as in business, the nonprofit sector, and philanthropy. The institute simultaneously serves as a dynamic hub of research and strategy for practitioners, scholars, and experts across a variety of disciplines.

**Critical Race Studies Specialization**

The UCLA School of Law is the first American law school to offer an advanced curriculum that fosters students’ systematic and rigorous study in the area of critical race studies. With many faculty members who have been instrumental in pioneering and advancing critical race theory, the Critical Race Studies specialization is essential to promoting insightful, intelligent public conversation about race relations. It is appropriate for law students who seek advanced study and/or practice in race and the law, critical race theory, civil rights, public policy, and other legal practice areas that are likely to involve working with racial minority clients and communities or working to combat racial inequality. The course of study emphasizes mastery of five areas: (1) history (centered on the Constitution but focused as well on a variety of other legal documents and experiences), (2) theory (critical race theory, jurisprudence, and theoretical advances outside the legal academy), (3) comparative subordination (understanding of the multiracial nature of American race relations, as well as how racial inequality is affected by discrimination based on gender, sexual orientation, and disability), (4)


d doctrine (case and statutory law and its interpretation), and (5) practice (including legal practice, community service, and lawyers’ use of social science inquiries and methods).

**Media, Entertainment, Technology, and Sports Law Specialization**

Los Angeles is the center of the entertainment industry, and recognizing the unique ability to offer a top-notch program in that arena, the school launched the LLM Media, Entertainment, Technology, and Sports Law specialization in 2005. The specialization offers the most comprehensive, advanced, and innovative approach to the study of entertainment and media law in the world. Students who fulfill the requirements have a solid grounding in the law, custom, theory, and policy in the motion picture, television, music, and other industries involved in creative and artistic matters. The program also prepares students who choose to work in nonprofit institutions, government, or academia in the area of entertainment, media, and intellectual property law.

**International and Comparative Law Specialization**

The school’s International and Comparative Law Program is one of the best in the nation. An expansive law faculty, course offerings, colloquia and symposia, student-edited journals, externships, foreign exchange offerings, and a broad community of interested students from around the world constitute a rich milieu in which to learn about the world. The International and Comparative Law specialization builds on these strengths and directs students to the study of entertainment and media law in the world. Students who fulfill the requirements have a solid grounding in the law, custom, theory, and policy in the motion picture, television, music, and other industries involved in creative and artistic matters. The program also prepares students who choose to work in nonprofit institutions, government, or academia in the area of entertainment, media, and intellectual property law.

**Law and Sexuality Specialization**

The Law and Sexuality specialization builds on the role of UCLA Law as a leader in the field of sexual orientation and gender identity law and scholarship. The goal of the specialization is to expand the quality and extent of legal knowledge and public discourse on issues related to sexuality and law. It is affiliated with the Williams Institute, a national think tank dedicated to conducting rigorous, independent research on sexual orientation and gender identity law and public policy. Students can take classes offered by faculty members and scholars associated with the institute and participate in a range of institute activities, including the speaker series and annual conference, moot court competition, and the Dukeminier Awards journal. Staff from the institute work with LLM students to secure internships in the Los Angeles area and to establish connections between LLM students and international experts and organizations working in their geographic or topic area. The specialization involves coursework on comparative and/or international law with focus on sexuality issues, including a course on law and sexuality and a Sexual Orientation Workshop seminar taught by Williams Institute teaching fellows.

**Public Interest Law Specialization**

Exploring the proper role of the law in creating and sustaining a just society, the Public Interest Law specialization strives to offer its students an innovative and intellectually ambitious curriculum that prepares them to engage in sophisticated representation of traditionally underserved clients and interests. The specialization, one of the nation’s top such programs, has a competitive admissions process. Students represent a broad range of political and ideological perspectives. Graduates work in a variety of settings, with focus on an array of social justice issues ranging from immigration, labor, and international human rights to healthcare, welfare and poverty, and equality rights.

**Programs and Centers**

**Center for Law and Economics**

The mission of the Center for Law and Economics is to foster academic scholarship exploring how economics can help us better understand and improve our laws. UCLA has one of the richest law and economics traditions in the world, and many of the founders of law and economics have made UCLA their academic home. The center, along with the Anderson Graduate School of Management and the law school’s Lowell Milken Institute for Business Law and Policy, sponsors the UCLA Law, Economics, and Organization Workshop, where speakers present their latest works-in-progress in the broad area of law and economics as it relates to business organizations.

**Clinical and Experiential Programs**

The School of Law has long been recognized for its innovative approach to clinical teaching that transforms the classroom into a real-world laboratory through the integration of theory and practice. It has been a national leader in clinical teaching since the early 1970s and continues to offer rigorous practical training across a wide range of practice areas. Students gain crucial firsthand experience that prepares them for future careers, learning from faculty members whose knowledge and expertise place them at the forefront of clinical education.

From the first year, students have opportunities to receive training and hands-on experience by participating in the El Centro Legal Clinics. El Centro places students with public interest legal services organizations to provide legal assistance to underserved individuals, families, and communities. Second- and third-year students can participate in a broad array of clinical courses that encompass all areas of legal practice—litigation, transactional, and public interest. In addition, second- and third-year students can do part-time and full-time externships, working for judges, government agencies, public interest law firms, and nonprofit organizations.

The clinical program is led by exceptional faculty members—visionary scholars who have contributed the cornerstone ideas that form the basis of clinical training, as well as a new generation of leaders who are bringing clinical education into areas of the legal profession that have long remained outside the scope of hands-on training.
Critical Race Studies Program
Throughout American history, race has profoundly affected the lives of individuals, growth of social institutions, substance of culture, and workings of our political economy. Not surprisingly, this impact has been substantially mediated through the law and legal institutions. To understand the deep interconnections between race and law and, particularly the ways in which race and law are mutually constitutive, is an extraordinary intellectual challenge with substantial practical implications. In a nation that is becoming more racially diverse and finds global issues at the forefront of political debate, these issues promise to remain central to the work of law practitioners and the research of legal scholars. The only one of its kind in the U.S., the Critical Race Studies Program is proud that some of the original architects of critical race theory are faculty members. It is the premier institutional setting for the study of the intersection between race and the law. Established in 2000, the program is a training ground for a new generation of practitioners, scholars, and advocates committed to racial justice theory and practice and is a multifaceted program that augments a rigorous course of study with research colloquia, symposia, interdisciplinary collaborations, and community partnerships in order to integrate theory and practice.

David J. Epstein Program in Public Interest Law and Policy
The school’s highly selective David J. Epstein Program in Public Interest Law and Policy was established in 1997 in response to the need to better train public-interest lawyers. It quickly became one of the nation’s most innovative and successful law school public interest programs, engaging students in an array of social justice issues. Recognizing the considerable debate about the proper role of the law in creating and sustaining a just society—and defining public interest broadly to include all interests underrepresented by the private market—the program strives to ensure that its students pursue an innovative and intellectually ambitious curriculum, and extracurricular involvement that best prepares them to engage in sophisticated representation of traditionally underserved clients and interests. Beyond the formal coursework, the program offers an array of opportunities for students to hear from leading public-interest practitioners and scholars, work on current policy problems, and become involved in public-interest activities within and outside the School of Law. The program also sponsors a series of forums, symposia, and activities that focus on social justice issues in which all students, faculty, alumni, and the broader community participate.

Emmett Institute on Climate Change and the Environment
The Emmett Institute on Climate Change and the Environment is the leading law school center focused on climate change and other critical environmental issues. Founded in 2008 with a generous gift from Dan A. Emmett and his family, the institute works across disciplines to develop and promote research and policy tools useful to decision makers locally, statewide, nationally, and beyond. The institute houses the school’s leading environmental programs, including the Frank G. Wells Environmental Law Clinic, a vital training ground for environmental lawyering. It also works hand in hand with the UCLA Sustainable Technology and Policy Program, a collaboration between the School of Law and the Fielding School of Public Health. Taking advantage of its home at one of California’s top law schools, the institute has particular expertise in the cutting-edge steps taken by California to lead the way toward meaningful reductions of greenhouse gas emissions. Lawmakers, the broader legal community, business leaders, academics, and the media rely on the institute as a trusted resource to analyze and answer questions about policy and law issues related to climate change and other environmental challenges.

Empirical Research Group
The UCLA School of Law is one of the only law schools in the country to offer its faculty members the support of trained statisticians to further empirical research. The Empirical Research Group (ERG) is a methodology-oriented research center that specializes in the design and execution of quantitative research in law and public policy, and enables faculty members to include robust empirical analysis in their legal scholarship. Articles and reports published by faculty members working with ERG have covered topics as diverse as bankruptcy, legal aid, pollution prevention, tax policy, gay rights, the living wage, and campaign finance disclosure. Articles, reports, working papers, and supporting data are posted on the ERG website. In addition to faculty scholarship, ERG trains law students as research assistants in empirical methods such as sampling, data collection, and statistics, and works closely with law students who conduct their own empirical research.

Externships and Field Placements
Through the School of Law’s extensive and diversified externship program, students can work in a supervised environment with a wide variety of employers and in a diverse range of practice areas. Students are able to extern with judges, government agencies, nonprofit organizations or, in some circumstances, entertainment and other in-house placements. They also may participate in the UCDC Law Program, a full-time externship program in Washington, DC. The field placement program brings together faculty members, students, and practicing lawyers to collaborate and connect classroom learning with practice opportunities.

Globalization and Labor Standards Program
For students interested in labor and employment issues, UCLA has a Globalization and Labor Standards (GALS) Program that maintains a web-based library of law review articles on all issues of international labor rights and global labor standards. GALS also publishes a newsletter, organizes conferences, and hosts regular speaker programs. Student contributors are involved in every stage of the project.
Health and Human Rights Law Project
The Health and Human Rights Law Project seeks to improve global health by using a framework grounded in international human rights law. Through multidisciplinary research, training, and mentorship, the project examines the relationship between health and human rights and fosters the next generation of leaders working in this area. With an emphasis on issues pertaining to sexuality, gender, and HIV/AIDS, the project focuses on health issues around which rights-claiming has particular salience.

International and Comparative Law Program
The International and Comparative Law Program is one of the best in the nation. Permanent faculty members who have built their reputations in the field offer numerous international and comparative law courses, such as human rights, international business transactions, national security law, international environmental law, international criminal law, European Union law, and Islamic law. The study of international and comparative law at UCLA is further strengthened by the opportunity to take courses in other UCLA departments. Some of the country’s best work in international economics, politics, and business occurs at UCLA, and many law students find it valuable to complement their law school work with coursework in other departments. Students may also pursue joint degrees with other departments with the approval of the law school administration.

Law and Philosophy Program
The School of Law and the Philosophy Department offer an exciting program in law and philosophy that takes advantage of the law faculty’s strength and depth in the subject and the school’s close relationship to the Philosophy Department. The program has many dimensions, including a wide range of courses at the intersection of law and philosophy and a legal theory workshop, open to all members of the law school and Philosophy Department, in which leading scholars present works in progress.

Lowell Milken Institute for Business Law and Policy
The central mission of the Lowell Milken Institute for Business Law and Policy is to influence the national legal and policy debate over the critical issues affecting the regulation and governance of business. The institute seeks to fulfill this mission by promoting innovative research at the intersection of law and business by a highly respected and widely recognized business law faculty, by offering a unique blend of policy and practice-oriented courses designed to prepare law students to be leaders in the new economy, and by hosting timely conferences and scholarly events on matters that advance the public discussion.

Native Nations Law and Policy Center
The Native Nations Law and Policy Center supports Native Nations to enhance their governmental institutions and laws, strengthen their cultural resource protections, and address critical public policy issues by bringing together the University’s academic resources and the knowledge and experience of tribal leaders and knowledge-holders. The center serves as the home for the Tribal Legal Development Clinic and Tribal Appellate Court Clinic that involve students in projects such as constitution drafting, code development, and serving as law clerks for Indian nation clients.

Negotiation and Conflict Resolution Program
The Negotiation and Conflict Resolution Program promotes an interdisciplinary approach to understanding and managing the competition for scarce resources in legal, business, and interpersonal contexts. The program’s broad mission includes the study of private and public transactions and disputes in domestic and international arenas. It brings together a community of scholars and students from a variety of fields across UCLA and throughout Southern California with overlapping scholarly, teaching, and practice interests.

Office of Public Interest Programs
The UCLA School of Law has a long-standing commitment to public service and is committed to cultivating an environment that encourages all of its students and alumni to better serve society in myriad ways. Students gain significant exposure and experience in public service through clinical courses, a pro bono program, an externship program, extensive public interest advising and informational programming, and numerous student organizations. The Office of Public Interest Programs, the hub of the school’s public interest efforts, hosts a variety of career-oriented programs and relevant public interest forums and events in which students, faculty, alumni, and the broader community participate. The office also hosts the annual Southern California Public Interest Career Day, which attracts more than 110 public service employers and some 1,000 students from around the region. The office also supports the student-run Public Interest Law Fund (PILF) and its annual auction, which raises monies to help fund summer public service internships.

Program on Understanding Law, Science, and Evidence
Founded in 2009, the Program on Understanding Law, Science, and Evidence (PULSE) explores the many connections between law and science, technology, and evidence. PULSE engages in interdisciplinary research, discussion, and programming to examine how basic facts about our world, furnished through science and credited as evidence, influence various venues of law and policymaking.

Resnick Program for Food Law and Policy
The Resnick Program for Food Law and Policy is dedicated to studying and advancing law and policy solutions to improve the modern food system. A national think tank at the school, the program develops key legal and policy research and tools to foster a food system, from farm to the fork, that is healthy both for consumers and the environment.

Office of Public Interest Programs
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Ziman Center for Real Estate
Reflecting a growing interdisciplinary focus at UCLA, the School of Law formed a partnership in 2005 with the Anderson Graduate School of Management to create the Ziman Center for Real Estate. The center is firmly grounded in the scholarship and teaching missions of both schools and offers practical application principles that help real estate industry professionals, public officials, and business people alike make critical policy and business decisions. The center truly bridges the divide between research and practice and offers students a full range of coursework that offers a holistic view of real estate issues.

Transnational Program on Criminal Justice
The Transnational Program on Criminal Justice (TPCJ) fosters research and discussion on issues of domestic, comparative, international, and transnational criminal justice systems and sponsors events to engage students and the criminal justice and comparative and international law scholarly community. The TPCJ serves as a resource for producing timely collaborative research on diverse topics at the intersection of criminal justice, comparative and international law, and human rights law. The goal is to generate knowledge and analysis not only for the scholarly community, but also for both practitioners and policymakers.

UCLA-RAND Center for Law and Public Policy
The UCLA-RAND Center for Law and Public Policy is a unique partnership of the UCLA School of Law and RAND Corporation. Its mission is to produce innovative legal scholarship that is grounded in multidisciplinary empirical analysis to guide legal and public policymakers in the twenty-first century. It was created to support collaborative research and to evolve with the doctrinal, institutional, and professional changes in the law. The main activities of the center include research, conferences, and the Empirical Legal Scholars Program.

Williams Institute on Sexual Orientation and Gender Identity Law and Public Policy
The Charles R. Williams Institute on Sexual Orientation and Gender Identity Law and Public Policy is the only think tank of its kind dedicated to the field of sexual orientation law and public policy. The institute supports legal scholarship, legal research, policy analysis, and education regarding sexual orientation discrimination and other legal issues that affect lesbian and gay people. The institute began with the recognition that issues central to sexual orientation law have profound implications for the development of the law and public policy in general. Drawing on the intellectual and material resources of UCLA, the institute serves as a national center for the interdisciplinary exploration of these issues by scholars, judges, practitioners, advocates, and students.

Ziffren Center for Media, Entertainment, Technology, and Sports Law
The Ziffren Center for Media, Entertainment, Technology, and Sports Law supports and expands the curricular offerings of the Entertainment, Media, and Intellectual Property Law specialization. For students interested in learning more about entertainment law, the program helps them earn externships with entertainment-related businesses, brings influential speakers to campus, and sponsors the industry’s top legal conference on entertainment issues, the annual UCLA Entertainment Symposium. Students run an entertainment-related journal, the UCLA Entertainment Law Review, as well as the student organization, the Entertainment Law Association.

SCHOOL OF NURSING
Linda P. Sarna, Dean
2-147 Factor Building
310-825-7181
e-mail: sonsaff@sonnet.ucla.edu
http://www.nursing.ucla.edu

The School of Nursing at UCLA enjoys a national and international reputation for excellence in teaching, research, and clinical practice.

A strong scientific basis underlies the teaching of nursing practice, leadership, and research. Related clinical experiences are arranged within the Ronald Reagan UCLA Medical Center, its affiliates, or in selected community sites. At the bachelor’s level, nurses are prepared as generalists with special skills in primary, secondary, and tertiary prevention and care within a population-based context, leadership, and evidence-based practice. At the master’s level, nurses are prepared as generalists in hospital-based care or for advanced nursing practice as nurse practitioners, clinical specialists, or administrators in a variety of settings and specialized areas of healthcare. The PhD program prepares scholars who conduct original research, generate new theories, and build the scientific basis for professional nursing practice. Research is both basic and applied.

The school has an exceptionally qualified faculty; many members have national and international reputations for excellence. The school is consistently ranked high for its teaching and research programs. The innovative curriculum is responsive to national needs in health care and the diversity of the patient population. Graduates of the program are sought by healthcare institutions and educational programs, and many alumni have become leaders in the field. Education in this research University, with its full range of academic disciplines, offers a rich environment for preparation in the health sciences.

History and Accreditation
In 1949, the Regents of the University of California authorized the School of Nursing as one of the professional schools of the UCLA Center for Health Sciences. This
action paved the way in 1950 for the opening of an undergraduate traditional program in nursing leading to the Bachelor of Science (BS) degree. In 1997 the original traditional BS program curriculum was revised to meet the educational needs of students who are registered nurses with Associate Degrees or diplomas in nursing. In 2006 the school reinstated a traditional/prelicensure BS program with admission at the freshman level. In 2010 the BS (Generic/Preliminary) program was renamed to the BS (Preliminary) program.

In 1951 a graduate program leading to the Master of Science (MS) degree in Nursing was established to prepare baccalaureate graduates for advanced practice nursing roles. In 1966 the Master of Nursing (MN) degree was established as an alternate option to the MS degree, which was discontinued in 1969. In 1996 the Office of the President and the Regents approved the change in the master’s degree designation from MN to Master of Science in Nursing (MSN), which is still awarded to graduates prepared as nurse practitioners and clinical nurse specialists. In 2006 the school launched the master’s entry clinical nurse (MECN)/prelicensure option within the MSN degree program, which is designed for prelicensure students with bachelor’s degrees or higher education in another discipline.

In 1986 the Regents approved the Doctor of Nursing Science (DNSc) degree program, and in 1987 the first doctoral students were admitted. In 1995 the change in doctorate degree designation from DNSc to PhD in Nursing was approved. In 2013 an en-route MS option was established within the existing PhD program. In 2015 UCLA approved conversion of the DNSc degree to a PhD for former DNSc graduates.

The prelicensure (BS and MECN) and advanced practice master’s programs are approved by the California Board of Registered Nursing. In 2011 the Commission on Collegiate Nursing Education (CCNE) accredited the existing bachelor’s and master’s degree programs for a term of 10 years, the longest award period that can be granted.

**Degrees**

The School of Nursing offers the following degrees:

Nursing BS, MS, MSN, PhD

**Concurrent Degree Programs**

Nursing MSN/Management MBA

Admission is currently suspended to the Nursing and Management concurrent degree.

**Philosophy of the School**

The UCLA School of Nursing is guided by a philosophy that embodies the mission and goals of the University of California. The philosophy addresses nursing, the clients of nursing, and nursing students. The school is committed to an interdisciplinary learning environment.

Nursing encompasses clinical practice, education, research, consultation, leadership, management, and service to the profession and the local and global community. It involves individuals, families, groups, organizations, and communities as clients. The profession must consider the human and physical environments that interact with these clients who may have health conditions that range from wellness to illness. Nursing activities must therefore include health promotion and maintenance, intervention and treatment, rehabilitation and restoration, and palliation. At an advanced practice level, nursing involves comprehensive healthcare that encompasses the responsibility and accountability for continuity of care across the health/illness spectrum.

Nursing research is both applied and basic and has as its core actual or potential human responses to illness and as its goal the development of nursing science. Guided by ethical standards that consider the perspectives of the client, the health care provider, and the larger society, nursing has a social mission that encompasses the right and responsibility to provide leadership in health policy and health care to all its clients regardless of disease status, gender, race, or culture.

People who receive client-centered nursing care are complex individuals who exist in relationship to others in their family and community. This complexity of person involves biological, behavioral, emotional, sociocultural, and spiritual dimensions. Each individual reflects a unique combination of these dimensions that interact dynamically with the environment. The clients of nursing are autonomous decision makers who have certain values and knowledge about themselves that not only are relevant but essential to successful healthcare outcomes. As a result, persons have a right and a responsibility to participate collaboratively in their care with the nurse and other health professionals.

Successful nursing students are active learners who bring unique gender, cultural, and ethnic life experiences to the professional practice of nursing. Students at all levels learn relevant theory, acquire practice skills, and are socialized into the profession of nursing. Increasing levels of complexity and sophistication of learning and socialization are expected of students in the different programs. Whether at the beginning practice, advanced practice, or scholar level, nursing students learn to apply knowledge, skills, and professional attitudes in their practice that may include educative, administrative, and research arenas. While students have the right and responsibility to participate in their own learning, faculty members have the
right and responsibility to structure the teaching/learning environment to facilitate learning. Individual academic counseling and a variety of one-on-one, small-group, and interactive learning formats assist students to meet program and individual learning goals.

**Undergraduate Admission**

The School of Nursing admits new undergraduate students in fall quarter only. BS (Prelicensure) students are admitted at the freshman and junior levels. See Nursing in the Curricula and Courses chapter for additional admission requirements.

**Undergraduate Degree Requirements**

School of Nursing students must satisfy University requirements, School requirements, and major requirements for the Bachelor of Science degree.

**University Requirements**

The University of California has two requirements that undergraduate students must satisfy in order to graduate: Entry-Level Writing or English as a Second Language and American History and Institutions. See Degree Requirements in the Undergraduate Study chapter for details.

School of Nursing students enrolled in English Composition 1A, 1B, and 2I must take each course for a letter grade.

**School Requirements**

The School of Nursing has six requirements that must be satisfied for the award of the degree.

**Unit Requirement**

Students must complete with a passing grade a minimum of 180 units. At least 83 of the 180 units must be upper-division courses numbered 100 through 199. A maximum of 216 units is permitted. Students with advanced placement or international baccalaureate credit may exceed the unit maximum by the amount of that credit.

**Scholarship Requirement**

A 2.0 (C) average is required in all work attempted at the University of California, exclusive of courses in UCLA Extension and those graded Passed/Not Passed. A 2.0 (C) average is also required in all upper-division courses in the major taken at the University, as well as in all courses applied toward the general education and University requirements. Each required nursing course in the school must be completed with a grade of C or better (C– grade is not acceptable). Elective courses may be taken on a Passed/Not Passed basis with prior approval, according to the policy listed in the Academic Policies chapter of this catalog.

**Academic Residence Requirement**

Students are in residence while enrolled and attending classes at UCLA as a major in the School of Nursing and must complete all units in the junior and senior years in residence.

**Writing Requirement**

Students must complete the University Entry-Level Writing or English as a Second Language (ESL) requirement prior to completing the school writing requirement.

Students admitted to the school are required to complete a two-term writing requirement—Writing I and Writing II. Two courses in English composition are required for graduation. Both courses must be taken for letter grades, and students must receive grades of C or better (C– grades are not acceptable).

**Writing I**

The Writing I requirement must be satisfied within the first three terms of enrollment by completing English Composition 3, 3D, 3DS, or 3SL with a grade of C or better (C– or a Passed grade is not acceptable). The Writing I requirement may also be satisfied by (1) scoring 4 or 5 on one of the College Board Advanced Placement Examinations in English, (2) a combination of a score of 720 or better on the SAT Reasoning Test, Writing section (last administered in January 2016) and superior performance on the English Composition 3 Proficiency Examination, (3) completing a course equivalent to English Composition 3 with a grade of C or better (C– or a Passed grade is not acceptable) taken at another institution, or (4) scoring 5, 6, or 7 on an International Baccalaureate Higher Level Examination.

Students whose native language is not English may need to take English Composition 1A, 1B, and 2I before enrolling in a Writing I course. All courses in the sequence must be passed with a grade of C or better (C– or a Passed grade is not acceptable).
Qualifying examination scores and courses are determined by the school Faculty Executive Committee.

Writing II. The Writing II requirement must be satisfied within seven terms of enrollment by completing one course from a faculty-approved list of courses published on the Registrar’s Writing II requirements web page and available in the Student Affairs Office. The course (Nursing 152W) must be completed with a grade of C or better (C- or a Passed grade is not acceptable).

If approved for general education (GE) credit, applicable Writing II courses may also fulfill a GE requirement.

Transfer students with 90 or more units who have completed the Intersegmental General Education Transfer Curriculum (IGETC) will have satisfied the Writing I and Writing II requirements. No transfer student is admitted to the school without completing, with a grade of C or better (C- grade is not acceptable), a college-level writing course that Undergraduate Admission accepts as equivalent to English Composition 3.

Quantitative Reasoning Requirement

Students must demonstrate basic skills in quantitative reasoning. The requirement may be satisfied by completing one approved UCLA course (see list below) or an equivalent course within the first seven terms of enrollment. The course must be taken for a letter grade, and students must receive a grade of C or better (C- grade is not acceptable). The requirement may also be satisfied by achieving an SAT Reasoning Test Mathematics Section score of 600 or higher or an SAT Subject Test in Mathematics score of 550 or higher. Approved UCLA courses and examinations, and qualifying scores, are determined by the school Student Affairs Committee. Approved courses are listed below. If approved for general education (GE) credit, applicable courses may also fulfill a GE requirement.

Transfer students with 90 or more units who have completed the Intersegmental General Education Transfer Curriculum (IGETC) will have satisfied the quantitative reasoning requirement. No transfer student is admitted to the school without completing, with a grade of C or better (C- grade is not acceptable), a college-level quantitative reasoning course that Undergraduate Admission accepts as equivalent to those approved by the Faculty Executive Committee.

Approved courses include:

- Biostatistics 100A, 100B
- Life Sciences 20, 30A
- Mathematics 2 (or any higher-number course except 19, 71SL, 72SL, 89, 89HC, 98XA, 98XB, 99, 103A-103B-103C, 105A-105B-105C, 189, 189HC, 195, 197, 199)
- Philosophy 31
- Political Science 6, 6R
- Program in Computing 10A, 10B, 10C
- Statistics 10, 13

General Education Requirements

General education (GE) is more than a checklist of required courses. It is a program of study that reveals to students the ways that research scholars in the arts, humanities, social sciences, and natural sciences create and evaluate new knowledge, introduces students to the important ideas and themes of human cultures, fosters appreciation for the many perspectives and the diverse voices that may be heard in a democratic society, and develops the intellectual skills that give students the dexterity they need to function in a rapidly changing world.

This entails the ability to make critical and logical assessments of information, both traditional and digital; deliver reasoned and persuasive arguments; and identify, acquire, and use the knowledge necessary to solve problems.

FOUNDATIONS OF KNOWLEDGE

General education courses are grouped into three foundational areas: Foundations of the Arts and Humanities, Foundations of Society and Culture, and Foundations of Scientific Inquiry.

Ten courses (48 units minimum) are required. A course taken to meet the Writing II requirement may also be applied toward a GE requirement. Preparation for the major courses may overlap with the foundation courses.

Students must meet with the student affairs officer in the Student Affairs Office to determine the applicability of GE Cluster courses toward Writing II or GE requirements. Courses listed in more than one category can fulfill GE requirements in only one of the cross-listed categories.

Foundations of the Arts and Humanities. Three 5-unit courses, one from each subgroup:
• Literary and Cultural Analysis
• Philosophical and Linguistic Analysis
• Visual and Performance Arts Analysis and Practice

The aim of courses in this area is to supply perspectives and intellectual skills necessary to comprehend and think critically about our situation in the world as human beings. In particular, the courses furnish the basic means to appreciate and evaluate the ongoing efforts of humans to explain, translate, and transform their diverse experiences of the world through such media as language, literature, philosophical systems, images, sounds, and performances. The courses introduce students to the historical development and fundamental intellectual and ethical issues associated with the arts and humanities and may also investigate the complex relations between artistic and humanistic expression and other facets of society and culture.

Foundations of Society and Culture. Three 5-unit courses, one from each subgroup and a third course from either subgroup:

• Historical Analysis
• Social Analysis

The aim of courses in this area is to introduce students to the ways in which humans organize, structure, rationalize, and govern their diverse societies and cultures over time. The courses focus on a particular historical question, societal problem, or topic of political and economic concern in an effort to demonstrate how issues are objectified for study, how data is collected and analyzed, and how new understandings of social phenomena are achieved and evaluated. Because communication skills are essential in the nursing profession, Communication Studies 10 is recommended for this foundational area.

Foundations of Scientific Inquiry. Four courses, two from each subgroup:

• Life Sciences
• Physical Sciences

The aim of courses in this area is to ensure that students gain a fundamental understanding of how scientists formulate and answer questions about the operation of both the physical and biological world. The courses also deal with some of the most important issues, developments, and methodologies in contemporary science.

Foundations Course Lists. Creating and maintaining a general education curriculum is a dynamic process; consequently, courses are frequently added to the list. For the most current list of approved courses that satisfy the Foundations of Knowledge GE plan, consult an academic counselor or see the Schedule of Classes.

Intersegmental General Education Transfer Curriculum

Transfer students from California community colleges must fulfill UCLA lower-division GE requirements by completing the Intersegmental General Education Transfer Curriculum (IGETC) prior to transfer. The curriculum consists of a series of subject areas and types of courses that have been agreed on by the University of California and the California community colleges. Because of course sequencing and the rigor of the program, students must fulfill the general education requirements prior to transfer.

Additional requirements are listed under Admission and Preparation for the Major in the Curricula and Courses chapter of this catalog.

Major Requirements

The School of Nursing sets two types of requirements that must be satisfied for the award of the degree: preparation for the major and the major. See the Curricula and Courses chapter of this catalog for details.

Policies and Regulations

Degree requirements are subject to policies and regulations, including the following:

Student Responsibility

Students should take advantage of academic support resources, but they are ultimately responsible for keeping informed of and complying with the rules, regulations, and policies affecting their academic standing.

Study List

The presentation of study lists by the students and their acceptance by the school evidences an obligation on the part of the students to faithfully perform the designated work to the best of their ability. Withdrawal from, or neglect of, any course entered on the study list, or a change in program without the formal permission of the assistant dean of Student Affairs renders students liable to enforced withdrawal from the University or other appropriate disciplinary action.

Students are expected to follow the course sequence specified for their program. After the first term, they may petition to carry a program of study exceeding 20 units provided they have an overall grade-point average of 3.0 (B or better) and have attained at least a B average in the preceding term with all courses passed.

Minimum Progress

Students are expected to complete satisfactorily at least 36 units during any three consecutive terms in residence; they are placed on probation if they fail to pass these units. They are subject to dismissal if they fail to pass at least 32 units in three consecutive regular terms in residence.

Concurrent Enrollment

Enrollment at a non-UC institution or UCLA Extension while enrolled at UCLA is not permitted except in extraordinary circumstances. No credit is given for courses taken concurrently elsewhere without the approval of the school.

Credit Limitations

The following credit limitations apply to all undergraduate students enrolled in the school:

Advanced Placement Examinations. Credit earned through the College Board Advanced Placement (AP)
Examinations may not be applied toward the general education requirements. Portions of AP Examination credit may be evaluated by corresponding UCLA course numbers (e.g., History 1C). If students take the equivalent UCLA course, unit credit for such duplication is deducted before graduation. See the school AP table for UCLA course equivalents and credit allowed for GE requirements.

Counseling Services

The School of Nursing gives direction and furnishes information to interested potential applicants to the BS program through admissions information sessions. The schedule for these sessions, program information, and applications are available at the school website. Applicants may contact the Nursing Admissions office by e-mail: info@nursing.ucla.edu.

On entry, students are assigned a faculty adviser to aid in planning their total program. Advisers and student affairs officers continue meeting with students each term to evaluate progress, to identify academic and personal needs and match them with available school and University resources, to confirm University and course requirements, and to maximize the students’ abilities to reach educational and professional goals. Due to the heavy course load that the school’s programs require, students are advised against working full time.

Honors

School of Nursing undergraduate students who achieve scholastic distinction may qualify for the following honors:

Dean’s Honors

To receive Dean’s Honors, undergraduate students must have at least 12 graded units per term with a grade-point average of 3.75. The honor is posted on the transcript for the appropriate term. Students are not eligible for Dean’s Honors in any given term if they receive an Incomplete or a Not Passed (NP) grade, change a grade, or repeat a course.

Latin Honors

Students who have achieved scholastic distinction may be awarded the bachelor’s degree with Latin honors. To be eligible, students must have completed 98 or more units for a letter grade at the University of California and must have attained an overall grade-point average at graduation that places them in the top five percent of College graduates (GPA of 3.908 or better) for summa cum laude, the next five percent (GPA of 3.831 or better) for magna cum laude, and the next 10 percent (GPA of 3.713 or better) for cum laude. Coursework taken on the Education Abroad Program is applied toward Latin honors at graduation. The minimum GPAs required are subject to change on an annual basis. Required GPAs in effect in the graduating year (fall, winter, spring, summer) determine student eligibility. Students should consult their Degree Audits, or the Registrar’s Latin honors web page for the most current calculations of Latin honors.

Graduate Study

The Master of Science in Nursing (MSN) degree program offers prelicensure and postlicensure options. The master’s entry clinical nurse (MECN)/prelicensure program is designed for students with a bachelor’s degree in another discipline who wish to become registered nurses. The advanced practice registered nurse (APRN)/postlicensure program is for registered nurses with a bachelor’s degree in nursing who wish to prepare for an advanced practice role, such as nurse practitioner or clinical nurse specialist.

The PhD program, which includes an en route MS option, prepares scholars who do original research, generate new theories, and build the scientific basis for professional nursing practice. Research is both basic and applied.

Admission

Detailed information about the graduate academic programs offered by the School of Nursing is included in the Program Requirements for UCLA Graduate Degrees.

For information on the proficiency in English requirements for international graduate students, see Graduate Admission in the Graduate Study chapter of this catalog.

Degree Requirements

For complete degree requirements, see Program Requirements for UCLA Graduate Degrees.

SCHOOL OF THEATER, FILM, AND TELEVISION

Teri E. Schwartz, Dean
102 East Melnitz Building
310-825-5761
e-mail: info@tft.ucla.edu
http://www.tft.ucla.edu

The School of Theater, Film, and Television consists of the Department of Theater and the Department of Film, Television, and Digital Media, recognized national centers for higher education in production and performance as well as history, theory, and criticism.

Whether exploring the ancient and sacred roots of theater or the latest secular rituals enacted by popular film, creating a dramatic character for the bare stage or a dramatic narrative on screen, writing scripts or scholarly articles, or making digital movies or designing websites, all students in the school study both the aesthetics and cultural significance of theater, film, and television.

Through an intensive, multidiscipline curriculum, the school defines the inherent differences of theater, film, television, and new media, affirms their similarities, and encourages their interaction. As expressive art forms, modes of communication, and cultural interventions, theater, film and television, and digital media have in common the ability and power to reflect and shape our perception of a complex, diverse, and ever-changing world. We
believe—as artists and scholars—that we have an obligation to reflect on this power and to use it responsibly. Situated in the diverse and culturally rich environment of Los Angeles and drawing on the many resources of the campus at large, including the Center for the Art of Performance at UCLA, Geffen Playhouse, and UCLA Film and Television Archive, the school offers the ideal setting for students to engage in the study and practice of art forms essential to a healthy and dynamic society.

Departments and Programs
The Department of Theater and the Department of Film, Television, and Digital Media are essential components of the rich intellectual, cultural, and professional life of UCLA. Depending on the degree involved, the school's programs are either strongly professional in nature or oriented toward advanced scholarly study and research in an atmosphere that recognizes and often draws on studio practice.

Students in undergraduate courses receive a broadly based, liberal education within the context of either theater or film and television. The Master of Fine Arts degree programs prepare talented and highly motivated students for careers in the worlds of theater, film, television, and digital production. The MA and PhD programs engage students in the critical study and research of these media, including their history, aesthetics, and theory, and prepare students for advanced research within the context of college and university teaching, as well as for writing and research in a variety of media-related professions.

In the Department of Theater, approximately 300 undergraduate and 83 graduate students interact with over 40 faculty members, outstanding guests of national and international standing, and a professional staff of 35 in an exciting artistic community of theater production and study. The theater and performance studies program offers CPhil and PhD degrees for the advanced scholarly study of theater and performance. Resources include the four theaters of the Macgowan Hall complex, with the latest technologies needed for the creation, control, and integration of scenery, lighting, and sound. Specializations in the Master of Fine Arts program include acting, design, directing, and playwriting.

The Department of Film, Television, and Digital Media includes both production and critical studies programs, with approximately 275 graduate and 100 undergraduate students. The 50 faculty members include leading scholars as well as members of the Los Angeles and international film and television professional communities. In production, graduate specializations are offered in the areas of film and television production, screenwriting, animation, and the producers program. The cinema and media studies program offers MA and PhD degrees for the advanced scholarly study of film and television. The department's resources in Melnitz Hall include three sound stages, three television studios, extensive editing, scoring, and viewing facilities, a complete animation laboratory for both traditional and computer-generated animation, and a laboratory and research facility for digital media.

The MA and PhD programs are supported by the collections of the University's libraries and the UCLA Film and Television Archive, the largest in the U.S. outside the Library of Congress. This archive forms a unique and priceless resource for research and classroom instruction. MA and PhD faculty members and students also participate in various campus organized research units.

Teaching Credentials
Students interested in obtaining instructional credentials for California elementary and secondary schools should contact the Teacher Education Program, 1009 Moore Hall.

Degrees
The School of Theater, Film, and Television offers the following degrees and undergraduate minors:
- Film and Television BA, MA, MFA, CPhil, PhD
- Individual Field BA
- Theater BA, MFA
- Theater and Performance Studies CPhil, PhD

Undergraduate Minors
- Film, Television, and Digital Media
- Theater

Undergraduate Admission
In addition to the University of California undergraduate application, departments in the School of Theater, Film, and Television require applicants to submit additional supporting materials. Information on departmental requirements is available at the school admissions web page.

Undergraduate Degree Requirements
School of Theater, Film, and Television students must satisfy University requirements, School requirements, and department requirements for the Bachelor of Arts degree.
University Requirements

The University of California has two requirements that undergraduate students must satisfy in order to graduate: Entry-Level Writing or English as a Second Language and American History and Institutions. See Degree Requirements in the Undergraduate Study chapter for details. School of Theater, Film, and Television students enrolled in English Composition 1A, 1B, and 2I must take each course for a letter grade.

School Requirements

The School of Theater, Film, and Television has seven requirements that must be satisfied for the award of the degree.

Unit Requirement

Students must satisfactorily complete for credit a minimum of 180 units for the bachelor's degree. At least 64 of the 180 units must be upper-division courses numbered 100 through 199. A maximum of 216 units is permitted. Students with Advanced Placement Examination of International Baccalaureate Examination (transfer) credit may exceed the unit maximum by the amount of that credit.

Scholarship Requirement

Students must earn at least a C (2.0) grade-point average in all courses undertaken at the University of California for receipt of the bachelor's degree, and in all upper-division courses in the major, and in all courses applied toward the general education requirements.

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<td>6. Upper-Division Nonmajor Courses</td>
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<td>1. Preparation for the Major</td>
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<tr>
<td>Courses that do not satisfy specific University, school, or department requirements are referred to as electives and can be used to meet the minimum unit requirement for graduation.</td>
</tr>
</tbody>
</table>

Academic Residence Requirement

Students are in residence while enrolled and attending classes at UCLA as a major in the School of Theater, Film, and Television. Of the last 45 units completed for the bachelor's degree, 35 must be earned in residence in the School of Theater, Film, and Television. No more than 18 of the 35 units may be completed in UCLA summer sessions. Courses offered by UCLA Extension may not be applied toward any part of the residence requirements.

Writing Requirement

Students must complete the University’s Entry-Level Writing or English as a Second Language (ESL) requirement prior to completing the school writing requirement.

Students admitted to the school are required to complete a two-term writing requirement—Writing I and Writing II. Two courses in English composition are required for graduation. Both courses must be taken for letter grades, and students must receive grades of C or better (C– grades are not acceptable).

Writing I. The Writing I requirement must be satisfied within the first three terms of enrollment by completing English Composition 3, 3D, 3DS, or 3SL with a grade of C or better (C– or a Passed grade is not acceptable).

The Writing I requirement may also be satisfied by (1) scoring 4 or 5 on one of the College Board Advanced Placement Examinations in English, (2) a combination of a score of 720 or better on the SAT Reasoning Test, Writing section (last administered in January 2016) and superior performance on the English Composition 3 Proficiency Examination, (3) completing a course equivalent to English Composition 3 with a grade of C or better (C– or a Passed grade is not acceptable) taken at another institution, or (4) scoring 5, 6, or 7 on an International Baccalaureate Higher Level Examination.

Students whose native language is not English may need to take English Composition 1A, 1B, and 2I before enrolling in a Writing I course. All courses in the sequence must be passed with a grade of C or better (C– or a Passed grade is not acceptable).

Writing II. The Writing II requirement must be satisfied within the first six terms of enrollment by completing one course from a faculty-approved list of Writing II courses published on the Registrar’s Writing II requirements web page. The course must be completed with a grade of C or better (C– or a Passed grade is not acceptable).

Applicable Writing II courses may also be applied toward the upper-division nonmajor requirement and, if approved for general education (GE) credit, may fulfill a GE requirement.

Transfer students with 90 or more units who have completed the Intersegmental General Education Transfer Curriculum (IGETC) will have satisfied the Writing I and Writing II requirements. No transfer student is admitted to the school without completing, with a grade of C or better (C– grade is not acceptable), a college-level writing course that Undergraduate Admission accepts as equivalent to English Composition 3.
**General Education Requirements**

General education (GE) is more than a checklist of required courses. It is a program of study that reveals to students the ways that research scholars in the arts, humanities, social sciences, and natural sciences create and evaluate new knowledge, introduces students to the important ideas and themes of human cultures, fosters appreciation for the many perspectives and the diverse voices that may be heard in a democratic society, and develops the intellectual skills that give students the dexterity they need to function in a rapidly changing world.

This entails the ability to make critical and logical assessments of information, both traditional and digital; deliver reasoned and persuasive arguments; and identify, acquire, and use the knowledge necessary to solve problems.

**FOUNDATIONS OF KNOWLEDGE**

General education courses are grouped into three foundational areas: Foundations of the Arts and Humanities, Foundations of Society and Culture, and Foundations of Scientific Inquiry.

Ten courses (48 units minimum) are required. GE-approved Writing II courses may fulfill an appropriate foundational area. See the foundational area descriptions below for a breakdown of courses required.

Courses listed in more than one category can fulfill GE requirements in only one of the cross-listed categories. A course used to satisfy a major requirement may not also be applied toward a GE requirement.

Students who successfully complete a yearlong GE Cluster series fulfill the Writing II requirement and complete 40 percent of their general education requirements.

**Foundations of the Arts and Humanities.** Five 5-unit courses, with no more than two from any one subgroup:

- Literary and Cultural Analysis
- Philosophical and Linguistic Analysis
- Visual and Performance Arts Analysis and Practice

The aim of courses in this area is to supply perspectives and intellectual skills necessary to comprehend and think critically about our situation in the world as human beings. In particular, the courses furnish the basic means to appreciate and evaluate the ongoing efforts of humans to explain, translate, and transform their diverse experiences of the world through such media as language, literature, philosophical systems, images, sounds, and performances. The courses introduce students to the historical development and fundamental intellectual and ethical issues associated with the arts and humanities and may also investigate the complex relations between artistic and humanistic expression and other facets of society and culture.

**Foundations of Society and Culture.** Three 5-unit courses, one from each subgroup and a third course from either subgroup:

- Historical Analysis
- Social Analysis

### Table: General Education Requirements

<table>
<thead>
<tr>
<th>Foundational Area</th>
<th>Required Courses</th>
<th>Total GE Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scientific Inquiry</strong></td>
<td>Physical Sciences (1 Course)</td>
<td><strong>Total = 8 units minimum</strong></td>
</tr>
<tr>
<td><strong>SCHOOL OF THEATER, FILM, AND TELEVISION</strong></td>
<td>Life Sciences (1 Course)</td>
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<tr>
<td><strong>GENERAL EDUCATION REQUIREMENTS</strong></td>
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<tr>
<td><strong>Foundations of the Arts and Humanities</strong></td>
<td>Literary and Cultural Analysis (5 Courses)</td>
<td><strong>Total = 25 units minimum</strong></td>
</tr>
<tr>
<td><strong>Philosophical and Linguistic Analysis</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Visual and Performance Arts Analysis and Practice</strong></td>
<td>(5 Courses)</td>
<td></td>
</tr>
<tr>
<td><strong>Foundations of Society and Culture</strong></td>
<td>Historical Analysis (1 Course)</td>
<td><strong>Total = 15 units minimum</strong></td>
</tr>
<tr>
<td><strong>Social Analysis</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Third course from either subgroup</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Foundations of Scientific Inquiry</strong></td>
<td>Life Sciences (1 Course)</td>
<td><strong>Total GE = 10 Courses/48 Units Minimum</strong></td>
</tr>
<tr>
<td><strong>Physical Sciences</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A course taken to meet the Writing II requirement may not also be applied toward a GE requirement.
The aim of courses in this area is to introduce students to the ways in which humans organize, structure, rationalize, and govern their diverse societies and cultures over time. The courses focus on a particular historical question, societal problem, or topic of political and economic concern in an effort to demonstrate how issues are objectified for study, how data is collected and analyzed, and how new understandings of social phenomena are achieved and evaluated.

Foundations of Scientific Inquiry. Two courses (8 units minimum), one from each subgroup:
- Life Sciences
- Physical Sciences

The aim of courses in this area is to ensure that students gain a fundamental understanding of how scientists formulate and answer questions about the operation of both the physical and biological world. The courses also deal with some of the most important issues, developments, and methodologies in contemporary science, addressing such topics as the origin of the universe, environmental degradation, and the decoding of the human genome. Through lectures, laboratory experiences, writing, and intensive discussions, students consider the important roles played by the laws of physics and chemistry in society, biology, Earth and environmental sciences, and astrophysics and cosmology.

Foundations Course Lists. Creating and maintaining a general education curriculum is a dynamic process; consequently, courses are frequently added to the list. For the most current list of approved courses that satisfy the Foundations of Knowledge GE plan, consult an academic counselor or see the Schedule of Classes.

Reciprocity with Other UC Campuses
Students who transfer to UCLA from other UC campuses or who change their major from the College or another UCLA school and have met all GE requirements prior to attending UCLA or changing their UCLA major are not required to complete the School of Theater, Film, and Television GE requirements. Written verification from the dean at the other UC campus or UCLA College or school is required. Verification letters should be sent to UCLA School of Theater, Film, and Television, Director of Student Services, Box 951622, Los Angeles, CA 90095-1622.

Intersegmental General Education Transfer Curriculum
Transfer students from California community colleges have the option to fulfill UCLA lower-division GE requirements by completing the Intersegmental General Education Transfer Curriculum (IGETC) prior to transfer. The curriculum consists of a series of subject areas and types of courses which have been agreed on by the University of California and the California community colleges. Although GE courses are degree requirements rather than admission requirements, students are advised to fulfill them prior to transfer. The IGETC significantly eases the transfer process, as all UCLA GE requirements are fulfilled when students complete the IGETC courses. Students who select the IGETC must complete it entirely before enroll-

Department Requirements
School of Theater, Film, and Television departments generally set two types of requirements that must be satisfied for the award of the degree: preparation for the major (lower-division courses) and the major (upper-division courses). Preparation for the major courses should be completed before beginning upper-division work.

Preparation for the Major
A major requires completion of a set of courses known as preparation for the major, which should be completed before upper-division work is undertaken. Each department sets its own preparation for the major requirements; see the Curricula and Courses chapter of this catalog.

The Major
A major is composed of no less than 56 units, including at least 36 units of upper-division courses. Students must complete their major with a scholarship average of at least 2.0 (C) in all courses in order to remain in the major. Each course in the school must be taken for a letter grade.

As changes in major requirements occur, students are expected to satisfy the new requirements insofar as possible. Hardship cases should be discussed with the department adviser, and petitions for adjustment should be submitted to the dean of the school when necessary.

Any department offering a major in the School of Theater, Film, and Television may require a general final examination.

Double Majors. Double majors in the School of Theater, Film, and Television and other academic units are not permitted.

Policies and Regulations
Degree requirements are subject to policies and regulations, including the following:

Student Responsibility
Students should take advantage of academic support resources, but they are ultimately responsible for keeping informed of and complying with the rules, regulations, and policies affecting their academic standing.

Study List
The study list is a record of classes that a student is taking for a particular term. Each term the study list must include from 12 to 19 units. The school has no provision for part-time enrollment. After the first term, students may petition to enroll in more than 19 units (up to 22 units maximum) if they have an overall grade-point average of 3.0 (B) or better and have attained at least a B average in the preceding term with all courses passed. Excess units petitions must be filed and approved by the Student.
Services Office no later than the end of the third week of instruction.
First-term transfer students from any other campus of the University may carry excess units on the same basis as students who have completed one or more terms at UCLA; however, they are not encouraged to do so.

Minimum Progress
During a regular term of enrollment, undergraduate students in the School of Theater, Film, and Television are required to enroll in a minimum of 12 units.
Students are expected to complete satisfactorily at least 36 units during any three consecutive terms in residence; they are placed on probation if they fail to pass these units. They are subject to dismissal if they fail to pass at least 32 units in three consecutive regular terms in residence.

Changing a Major
Students in good academic standing who wish to change their major may petition to do so, provided they can complete the new major within the 216-unit limit. Petitions must be submitted to and approved by the department or committee in charge of the new major. Admission to certain majors may be closed or restricted; changes are normally not permitted if students are on probation or have begun their last term.
Due to curriculum changes, students in the Theater major are no longer allowed to change their major to Film and Television at the end of their sophomore year.

Concurrent Enrollment
Enrollment at another institution or UCLA Extension while enrolled at UCLA is not permitted except in extraordinary circumstances. No credit is given for courses taken concurrently elsewhere without the approval of the school.

Credit Limitations
The following credit limitations apply to all undergraduate students enrolled in the school:
Advanced Placement Examinations. Credit earned through the College Board Advanced Placement (AP) Examinations may be applied toward the school and general education requirements. If students take the equivalent UCLA course, unit credit for such duplication is deducted before graduation. See the school AP table for UCLA course equivalents and credit allowed for GE requirements.
Graduate Courses. Undergraduate students who wish to take graduate courses (200 level) for credit toward the bachelor’s degree must petition for advance approval of the department chair and the dean of the school and must meet the specific qualifications. Courses numbered in the 300, 400, and 500 series are not open for credit to undergraduate students.
UCLA Extension. Extension courses with the prefix X on those numbered in the 1 through 199, 200, 300, 400, or 800 series may not be applied toward the degree.

Upper-Division Tutorials. Credit for upper-division tutorials numbered 195 through 199 is limited to a maximum of 8 units in a single term and a maximum of 32 units total for a letter grade.

Counseling Services
The School of Theater, Film, and Television offers advising, program planning in the major and general education requirements, and individual meetings with departmental counselors, including a yearly degree check. Prior to registration and enrollment in classes, each new student is assigned to a counselor in the major department. For additional counseling information, contact the Student Services Office, 103 East Melnitz Building.

Honors
School of Theater, Film, and Television undergraduate students who achieve scholastic distinction may qualify for the following honors and programs:

Dean’s Honors
Dean’s Honors are awarded each term to students who complete their program of study with distinction according to criteria established by the dean of the school.

Latin Honors
Students who have achieved scholastic distinction may be awarded the bachelor’s degree with Latin honors. To be eligible, students must have completed 90 or more units for a letter grade at the University of California and must have attained an overall grade-point average at graduation that places them in the top five percent of College graduates (GPA of 3.908 or better) for summa cum laude, the next five percent (GPA of 3.871 or better) for magna cum laude, and the next 10 percent (GPA of 3.796 or better) for cum laude. Coursework taken on the Education Abroad Program is applied toward Latin honors at graduation. The minimum GPAs required are subject to change on an annual basis. Required GPAs in effect in the graduating year (fall, winter, spring, summer) determine student eligibility. Students should consult their Degree Audits, or the Registrar’s Latin Honors web page for the most current calculations of Latin honors.

Graduate Study
The advanced degree programs offered in the School of Theater, Film, and Television supply graduate students with unique research opportunities when combined with special resources, such as the Young Research Library, UCLA Film and Television Archive, Geffen Playhouse, special collections of the Arts Library, and University exhibit and performance venues.
A program in teaching is offered by the Graduate School of Education and Information Studies in each of the areas. Fellowships, grants, and assistantships are available through the dean of the Graduate Division. Donor awards are available through the School of Theater, Film, and Television.
Admission
In addition to requiring that applicants hold a bachelor’s degree from an accredited U.S. institution or an equivalent degree of professional title from an international institution, each department in the school has limitations and additional requirements. Detailed information can be found in Program Requirements for UCLA Graduate Degrees.

For information on the proficiency in English requirements for international graduate students, see Graduate Admission in the Graduate Study chapter of this catalog.

Degree Requirements
Requirements to fulfill each degree objective vary according to the degree and the department. For complete degree requirements, see Program Requirements for UCLA Graduate Degrees.
### Curricula and Courses

#### Course Listings

Departments and programs are listed alphabetically, with the College or school administering the program identified in the program heading. Curricula and courses are listed under each program. Every effort has been made to ensure the accuracy of the information presented. However, all courses, course descriptions, instructor designations, and curricular degree requirements described herein are subject to change or deletion without notice. Changes to course descriptions are available at the Registrar's course descriptions web page. For the most current course offerings by term, see the Schedule of Classes.

For a complete outline of graduate degree requirements, see Program Requirements for UCLA Graduate Degrees.

#### Undergraduate Course Numbering

Undergraduate courses are classified as lower division and upper division. Lower-division courses (numbered 1–99) are often surveys offering preliminary introductions to the subject field. They are designed primarily for freshmen and sophomores, though upper-division students may enroll for unit and grade credit. Lower-division courses may not be applied toward graduate degrees.

Upper-division courses (numbered 100–199) are open to all students who have met the requirements indicated in departmental requirements or the course description. Preparation generally includes at least one lower-division course in the subject or two years of college work. With approval of the major department, graduate students may take 100-series courses toward satisfaction of master's degree requirements.

#### Undergraduate Seminars and Tutorials

Sophomore seminars (numbered 88) are departmentally sponsored courses designed to provide sophomores with the opportunity to participate in small seminars to enhance writing, verbal, and analytical skills.

Honors seminars and tutorials (numbered 89/189 and 89HC/189HC) are primarily designed for students in the College Honors Program. They are adjunct to lecture courses and explore lecture topics in more depth through supplemental readings, papers, or other activities.

Student Research Program tutorials (numbered 99) offer students entry-level research experiences. Students serve as apprentices working with an individual faculty member or in a research group. Students are graded P/NP based on the number of hours they participate in research.

Upper-division seminars (numbered 190–194) are small seminars with between 15 and 20 students that focus on research practice or issues. Many are designed to be taken along with a tutorial course in the 195–199 series.

Upper-division tutorials (numbered 195–199) offer advanced opportunities for research through faculty-supervised internships and apprenticeships as well as honors research, directed research, and senior projects. Courses are structured by the instructor and student at the time they are initiated and are open to juniors (with a minimum 3.0 grade-point average in the major field), seniors, and graduate students. To enroll, students submit a contract (available online through MyUCLA) and have it approved by both the instructor and department chair.

Note: Courses numbered 19, 89, 89HC, 99, 189, and 189HC are not listed in this catalog. For current course descriptions, see the Registrar's course descriptions web page.

#### Graduate Course Numbering

Graduate courses numbered 200–299 are generally open only to graduate students who have completed basic undergraduate courses in the subject. Courses and seminars in the 200 series can fulfill the minimum graduate course requirement for any advanced degree.

With departmental and instructor consent, and subject to requirements in the appropriate College or school, undergraduate students may enroll in 200-series courses for unit credit toward the bachelor's degree. If students take a graduate course as an undergraduate, they may not apply that same course later toward a higher degree.

Graduate courses numbered 300–399 are highly specialized teacher-training courses that are not applicable toward University minimum requirements for graduate degrees. They are acceptable toward the bachelor's degree only at the discretion of the individual College or school.

Graduate courses numbered 400–499 are designed for professional programs leading to graduate degrees other than the MA, MS, and PhD. These courses may not be used to satisfy minimum graduate course requirements for the MA or MS degree but may apply as electives.

Graduate courses numbered 500–599 are reserved for advanced study and are not open to undergraduate students. Courses are numbered as follows: 595/596, directed individual study or research; 597, preparation for master's comprehensive or doctoral qualifying examination; 598, master's thesis research and preparation; and 599, doctoral dissertation research and preparation. Courses numbered 501 are not individual study and research but are cooperative programs held in conjunction with USC. See individual departmental listings for specific limitations on 500-series courses.

Note: These definitions do not apply to the School of Law, which maintains its own course numbering system.

#### Temporary Course Offerings

Courses that are temporary in nature, such as one-term-only or one-year-only, are not listed in the catalog. Their descriptions can be found in the online Schedule of Classes.

#### Concurrent and Multiple Listings

Concurrently scheduled courses (identified by a capital C before the course number) are pairs of courses, usually within a single department or program, for which credit is given at two levels—undergraduate and graduate. Concurrently scheduled courses are offered at the same time and place with the same instructor, but work levels and performance standards are evaluated differently for students at each level. (Concurrently scheduled courses as described here should not be confused with concurrent courses offered through UCLA Extension.)

Multiple-listed courses (identified by a capital M before the course number) are courses offered jointly by more than one department. They need not have identical course numbers, but all other aspects of the course must be the same, such as title, units, requisites, format, and level. For example, Language in Culture is offered by the Department of Anthropology (Anthropology M140) and the Department of Linguistics (Linguistics M146). The course is listed under both departments.

#### UCLA Extension Courses

In general, students may not attend UCLA Extension for degree credit if they are enrolled in UCLA regular session at the same time. However, certain Extension courses (numbered 1–199), prefixed by XL or XLC in the Extension course listings, yield credit toward the bachelor's degree. Graduate students may petition to apply up to two XLC courses toward the master's degree. For more details, see Concurrent Enrollment in the Academic Policies chapter of this catalog.
Aerospace Studies – Air Force ROTC

College of Letters and Science

218 Student Activities Center
Box 951611
Los Angeles, CA 90095-1611
310-825-1742
afrotc@ucla.edu
http://www.afrotc.ucla.edu

Timothy C. Reynolds, MBA, MA, Lieutenant Colonel, Chair

Professor
Timothy C. Reynolds, MBA, MA, Lieutenant Colonel

Adjunct Assistant Professors
Jonathan R. Liscombe, MA, Major
Kevin Plascencia, BS, First Lieutenant

Scope and Objectives

In accordance with the National Defense Act of 1920 and with the concurrence of the Regents of the University, a unit of the Army Senior Division Reserve Officers’ Training Corps (ROTC) was established on the Los Angeles campus of the University in July 1920. Navy and Air Force units were established in 1938 and 1949 respectively.

This voluntary training in the Air Force ROTC program allows students to qualify for an officer’s commission in the Air Force while completing their college education. The ROTC curriculum are not considered academic majors, but ROTC courses may be taken as free electives and applied toward the total course requirements of a major. For students contracted in the Aerospace Studies Department, 36 units of aerospace studies credit may be applied toward the requirements for the bachelor’s degree. The ROTC program is also available through UCLA Extension.

All three ROTC departments offer voluntary four- and three-year programs for freshmen and sophomores. The Army and Navy/Marine Corps also offer a two-year program for current and transfer students. All have leadership laboratories that teach leadership and management skills.

All commissions are reserve commissions. Active duty obligation following commissioning varies depending on branch of service and designated career field or occupational specialty.

Scholarships

ROTC scholarships are awarded on a competitive basis to U.S. citizens regardless of parents’ income. Scholarships cover tuition, a book allowance, fees, and a tax-free monetary allowance during the academic year. Applications for scholarships may be obtained online or by calling 310-825-1742. Completed applications should be submitted prior to August 15 for early consideration and no later than December 1 of the year preceding college matriculation.

Air Force ROTC Program

Air Force ROTC provides selected students with the opportunity to develop those attributes essential to positions of high responsibility as a commissioned officer in the U.S. Air Force. This includes understanding Air Force history, doctrine, operating principles, and national security policies, demonstrating the ability to apply modern principles of management and human relations in the Air Force environment, and mastering of leadership theory and techniques. Students must demonstrate dedication to their assignments, willingness to accept responsibility, and the ability to think critically and communicate with clarity and precision.

Undergraduate Study

The Air Force ROTC program is available to full-time students with at least three years of undergraduate and/or graduate study remaining and consists of one to two years of the General Military Course, or GMC (Aerospace Studies 1A, 1B, 1C, 20A, 20B, and 20C), followed by a two-year Professional Officer Course, or POC (Aerospace Studies 130A, 130B, 130C, 140A, 140B, and 140C). For students completing the program in four years, GMC participation requires one hour of academic class and two hours of leadership laboratory each week during the academic year. For students completing the program in three years, GMC participation requires taking one course from Aerospace Studies 1A, 1B, or 1C, one course from 20A, 20B, or 20C, and two hours of leadership laboratory each week during the academic year. Students incur no military obligation for GMC participation unless they qualify and accept an Air Force ROTC scholarship during or after their sophomore year.

Students who complete the GMC and wish to enter the POC attend a four-week field training course the summer following GMC completion. There is no obligation to apply. U.S. citizen is required. Students are selected on a competitive basis with consideration given to academic major, grade-point average, aptitude examination scores, performance during an officer board interview, and a physical fitness test. Students selected for summer field training are given meals, quarters, clothing, and travel and incidental expenses. Subjects covered at field training include junior officer training and leadership and management situations as means of demonstrating and exercising practical application of concepts being studied. P/NP or letter grading.

Aerospace Studies

Lower-Division Courses

Freshman-Year Courses

A. Leadership Laboratory. (No credit) Laboratory, three hours. Mandatory for and limited to Air Force ROTC cadets. Provides cadets with practical command and staff leadership experiences through performance of various tasks within framework of organized cadet corps. As integral part of aerospace studies curriculum, provides experiences designed to develop leadership potential and serves as orientation to active duty. P/NP grading.

1A-1B-1C. Foundation of U.S. Air Force. (2-2-2) Lecture, one hour. Survey course designed to introduce students to U.S. Air Force and Air Force Reserve Officers’ Training Corps. Topics include mission and organization of Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and introduction to communication skills. P/NP or letter grading.

Sophomore-Year Courses

20A-20B-20C. Evolution of U.S. Air Force and Space Power. (2-2-2) Lecture, one hour. Historical survey of air and space power designed to motivate students to transition from Air Force ROTC cadet to officer candidate. Featured topics include Air Force heritage and leaders; introduction to air and space power through examination of competencies, functions, and doctrines; and continued application of communication skills. P/NP or letter grading.

Upper-Division Courses

130A-130B-130C. Air Force Leadership Studies. (4-4-4) Lecture, three hours. Requisites: courses 1A, 1B, 1C, 20A, 20B, 20C. Study of leadership and quality management fundamentals, professional knowledge, Air Force doctrine, leadership ethics, and communication skills required of Air Force junior officers. Use of case studies to examine Air Force leadership and management situations as means of demonstrating and exercising practical application of concepts being studied. P/NP or letter grading.

140A-140B-140C. National Security Affairs/Preparation for Active Duty. (4-4-4) Lecture, three hours. Requisites: courses 1A, 1B, 1C, 20A, 20B, 20C. Study of national security processes, regional studies, advanced leadership ethics, and Air Force doctrine. Special topics focus on military as profession, officership, military justice, civilian control of military, preparation for active duty, and current issues affecting military professionalism. Within this structure, continued emphasis on refining communication skills. P/NP or letter grading.

197. Individual Studies in Aerospace Studies. (2 or 4) Tutorial, three hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.
Undergraduate Study

African American Studies BA

Preparation for the Major

Required: Two courses from African American Studies M5, 6, M10A.

Transfer Students

Transfer applicants to the African American Studies major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one African American Studies or civilizations of Africa course or equivalent.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Twelve upper-division courses as follows: (1) two history and/or literature courses selected from African American Studies M104A through M104D, M150D, M158A through M158E, M179A, (2) two upper-division breadth courses from any of the following departments or programs: American Indian Studies, Asian American Studies, Chicana and Chicano Studies, or Gender Studies, and (3) a concentration of five courses in one of the following tracks and three courses in the other: (a) humanities—African American Studies M102, M103A, M103B, M103E, M104A through M104E, M107, M109, M110A, M110B, M111, CM112A, CM135A, CM135B, M150D, M158A through M158E, M179A, 188A, 188B, C191, and (b) social sciences—African American Studies M114C, M118, M120, M144, M150D, M154C, M158A through M158E, M159P, M164, M165, M167, M172, M173, M178, M179A, M182A, M182B, M182C, M183A, M183B, M183C, 188A, 188B, C191, M194A, M194B.

No more than 8 graded units of African American Studies 195, 197, 198, and 199 may be applied toward the major.

To enter the minor, students must be in good academic standing (2.0 grade-point average), have completed 45 units, and file a petition with the African American Studies student affairs officer. A minor program of study with courses from various disciplines germane to African American studies.

African American Studies Minor

The African American Studies minor is designed for students who wish to augment their major program of study with courses from various disciplines germane to African American studies.

To enter the minor, students must be in good academic standing (2.0 grade-point average), have completed 45 units, and file a petition with the African American Studies student affairs officer. A minor program of study with courses from various disciplines germane to African American studies.

Required Lower-Division Courses (9 to 10 units): Two courses from African American Studies M5, 6, M10A.

Required Upper-Division Courses (20 to 25 units): Five upper-division African American studies courses.

No more than 4 graded units of African American Studies 195, 197, and 199 may be applied toward the minor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor, and at least 16 units applied toward the minor must be taken in residence at UCLA. Transfer credit for any of the above is subject to program approval; consult with the student affairs officer before enrolling in any courses for the minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of African American Studies offers the Master of Arts (MA) degree in African American Studies. A concurrent degree program (African American Studies MA/Law JD) is also offered.

African American Studies

Lower-Division Courses

1. Introduction to Black Studies. (5) Lecture, three hours; discussion, one hour. Introduction of methods, theories, conceptual frameworks, and key debates in black studies. Introductions of definitions of blackness in relation to class, gender, and sexuality; essential role of African American Studies in development of capitalism, liberalism, and democracy; and concepts and issues in black studies.

Honor Program

African American Studies majors with grade-point averages of 3.5 or better are eligible for the honors option that requires the completion of a senior thesis. African American Studies majors with grade-point averages of 3.0 or better are eligible for the honors option that requires the completion of a senior thesis. African American Studies faculty member. Students must take African American Studies 198 (independent study course) with an approved professor who oversees the thesis requirement. For more information, contact the student affairs officer in the department.

African American Studies Minor

The African American Studies minor is designed for students who wish to augment their major program of study with courses from various disciplines germane to African American studies.

To enter the minor, students must be in good academic standing (2.0 grade-point average), have completed 45 units, and file a petition with the African American Studies student affairs officer. A minor program of study with courses from various disciplines germane to African American studies. To enter the minor, students must be in good academic standing (2.0 grade-point average), have completed 45 units, and file a petition with the African American Studies student affairs officer. A minor program of study with courses from various disciplines germane to African American studies.

Required Lower-Division Courses (9 to 10 units): Two courses from African American Studies M5, 6, M10A.

Required Upper-Division Courses (20 to 25 units): Five upper-division African American studies courses.

No more than 4 graded units of African American Studies 195, 197, and 199 may be applied toward the minor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor, and at least 16 units applied toward the minor must be taken in residence at UCLA. Transfer credit for any of the above is subject to program approval; consult with the student affairs officer before enrolling in any courses for the minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of African American Studies offers the Master of Arts (MA) degree in African American Studies. A concurrent degree program (African American Studies MA/Law JD) is also offered.
ties, competing theories and research findings, def-
ing characteristics and contemporary issues. Letter grading.

6. Trends in Black Intellectual Thought. (5) Lecture, three hours; discussion, one hour. Overview of major intellectual trends that have defined ways in which Afro-American thinkers have interpreted experiences of blacks in U.S., drawing from such fields as history, philosophy, and literature. Letter grading.

M10A. History of Africa to 1800. (5) (Same as History M10A.) Lecture, three hours; discussion, one hour. Exploration of development of African societies from earliest times to late 18th century. P/NP or letter grading.

M106. Leadership and Student-Initiated Retention. (2) (Same as American Indian Studies M118, Asian American Studies M116, and Chicana and Chicano Studies M118.) Seminar, two hours. Limited to freshmen/sophomores/first-year transfer students. Not open for credit to students with credit for course M118. Exploration of issues in retention at UCLA through lens of student-initiated and student-run pro-

Lecture, three hours; discussion, one hour. How do we know what we know? Why do we think what we think? Where does our knowledge of self come from? Intensive study of theoretical tools to begin to an-

M103A. African American Theater History: Slavery to Mid-1800s. (4) (Same as Theater M103A.) Lecture, four hours. Designed for juniors/seniors. Exploration of extant materials on history and literature of theater as developed and performed by African American artists in America from slavery to mid-1800s. Letter grading.

M103B. African American Theater History: Minor-

M104A. Contemporary African American Litera-

tecture, four hours; discussion, one hour (when scheduled). En-

M105. African American Literature of 1960s and 1970s. (5) (Same as English M105C.) Lecture, four hours; discussion, one hour (when scheduled). En-

M104C. African American Literature of 1960s and 1970s. (5) (Same as English M104C.) Lecture, four hours; discussion, one hour (when scheduled). En-

M103E. African American Theater History: Depres-
sion to Post-Depression. (Same as Theater M103E) Lect-

M105A. African American Music History and Film. (4) Lecture, three hours; discussion, one hour (when scheduled). En-

M105B. Issues in Pan-African Biography and Autobi-

ography. (4) Seminar, four hours. Introduction of his-

M105C. Comparative Racialization and Indigeneity. (4) (Same as Ethnomusicology M110A-M110B.) Lecture, four hours; discussion, one hour. Focus on major ideological trends and political philos-

M106. Race, Inequality, and Public Policy. (4) (Same as Public Policy M120.) Lecture, three hours; discussion, one hour. Background in economics, so-

M107. Cultural History of Rap. (Same as Ethno-
musicology M119.) Lecture, four hours; discussion, one hour. Introduction to development of rap music and hip-hop culture, with emphasis on musical and verbal qualities, philosophical and political ideologies, gender representation, and influences on cinema and popular culture. P/NP or letter grading.

108. Jazz and Political Imagination. (4) Lecture, three hours; discussion, one hour. How has jazz come to symbolize so many different political tendencies—freedom and democratic values, threat to order and civil society, possibility of integration and racial har-
morality, black liberation and nationalism, conservatism, surrealism, socialism, etc.; throughout 20th century? What about jazz enables people to read their political aspirations and hopes in what is primarily instru-
tmental, improvised music? Exploration of history of ideas about jazz, specifically how writers, activists, movements, and musicians understood politics of jazz. Exploration of political imaginations—here and abroad—in particular in jazz and question of freedom—social freedom, political freedom, cultural, and artistic freedom. P/NP or letter grading.

M109. Women in Jazz. (4) (Same as Ethnomusicology M109 and Gender Studies M109.) Lecture, four hours; discussion, one hour. Focus on one woman in jazz and allied musical traditions from 1880s to present. Survey of women vocalists, instrumentalists, composers/arrangers, and producers and their im-

M111. Ellingtonia. (Formerly numbered M145S.) (Same as Ethnomusicology M111.) Lecture, three hours. Music of Duke Ellington, his life, and far-

M112A. African American Music in California. (4) (Same as Ethnomusicology CM112.) Lecture, four hours. Historical and analytical examination of African American music in California, including history, migra-
tion, and urbanism to determine their impact on development of African American music in Cali-

M114C. African American Political Thought. (4) (Same as Labor and Workplace Studies M114C and Political Science M180A.) Lecture, three or four hours; discussion, one hour (when scheduled). Intensive in-

M120. Comparative Racialization and Indigeneity. (Same as American Studies M124.) Lecture, three hours. Examination of processes and histories of racialization and colonization in U.S. Discussions,
action throughout recent U.S. history. Examination of particular lessons of nonviolent movements as they impact social change organizing in Los Angeles. P/NP or letter grading.

174. Intraracial Differences in 20th-Century Black America. (4) Lecture, four hours. Discussion of evolu-

175. Racial and Ethnic Disparities in Healthcare. (5) Lecture, four hours. Designed for students who are seeking to become healthcare professionals so they understand importance of how race and ethnicity im-

176. Race, Racism, and Law. (4) Lecture, four hours. Throughout American history, race relations have been inexorably linked to law. Both perpetuation of racial gap? Provides students with basic foundation for thinking through contemporary de-

177. African Americanisms in Higher Education. (4) Lecture, four hours. Discussion and exploration of challenges facing black students at predominantly white institutions (PWIs), ways in which Proposition 209 has affected black student community, spaces on and off campus that empower students, and issues of access and equity in higher education. Critical discus-

178. Sociology of Caribbean. (4) Same as So-

179. Topics in African American Literature. (5) (Same as English M191A.) Seminar, three or four hours. Enforced requirement: English Composition 3 or 3H. Variable specialized studies course in African American literature. Topics may include Harlem Renaissance, Post-World War II literature in novel, Black women's writing, contemporary African American fic-

180. Language, Literacy, and Human Development Ethnography (2) (Same as Education M182A.) Field-

181. Variable Topics Research Seminars: Afro-

182. Language, Literacy, and Human Development Ethnography (2) (Same as Education M182B.) Field-

183. Language, Literacy, and Human Develop-

184. Culture, Communication, and Human De-

185. Culture, Gender, and Human Development Ethnography (3) (Same as Education M183A.) Field-

186. Race and Public Policy. (5) Seminar, three hours. Exploration of range of public policies con-

187. Research Seminars in Afro-American Studies. (5) Same as History M197.) Seminar, three hours; labora-

188. Directed Research or Senior Project in Afro-

189. Graduate Courses

M200A. Advanced Historiography: Afro-Ameri-

M200C. Black Families and Relationships. (4) (Same as Sociology M262.) Seminar, three hours. Evaluation of social, cultural, and historical forces that affect family organization, stability, and dissolution. Black intimate relationships, beginning with theoretical framework from black feminism to analysis of eco-

M200D. Black Families and Relationships. (4) (Same as Sociology M262.) Seminar, three hours. Evaluation of social, cultural, and historical forces that affect family organization, stability, and dissolution. Black intimate relationships, beginning with theoretical framework from black feminism to analysis of eco-

M200E. Black Families and Relationships. (4) (Same as Sociology M262.) Seminar, three hours. Evaluation of social, cultural, and historical forces that affect family organization, stability, and dissolution. Black intimate relationships, beginning with theoretical framework from black feminism to analysis of eco-

Graduate Courses

M200A. Advanced Historiography: Afro-Ameri-

M200C. Black Families and Relationships. (4) (Same as Sociology M262.) Seminar, three hours. Evaluation of social, cultural, and historical forces that affect family organization, stability, and dissolution. Black intimate relationships, beginning with theoretical framework from black feminism to analysis of eco-

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M200E. Black Families and Relationships. (4) (Same as Sociology M262.) Seminar, three hours. Evaluation of social, cultural, and historical forces that affect family organization, stability, and dissolution. Black intimate relationships, beginning with theoretical framework from black feminism to analysis of eco-

within black body and critical interrogation of notions of blackness and authenticity in racial identification. Contribution to greater understanding of black intimate relationships in different contexts, including lesbian and gay identities, Caribbean and other ethnic identities, and inter-racial intimacies. S/U or letter grading.

200D. African American Women's History. (4) Seminar, four hours. Historical examination of black women's experiences in U.S. from ante bellum era to present. Exploration of key themes, including gender formation, sexuality, labor and class, collective action, gender and sexual violence, reproduction, and role of law. How have intersecting forms of oppression impacted black women's historical lives? How is difference constructed through interrelated and overlapping ideologies of race and gender? How do historians uncover black women's historical lives and what are challenges to such discoveries? Examination of black women's individual and collective struggles for freedom from racism, sexism, and heteropatriarchy as well as black women's participation in and challenge to social movements, including suffrage, black liberation, civil rights, and black power. Letter grading.


M200G. Race, Class, and Gender: Constructing Black Womanhood and Black Manhood in America. (4) (Same as Sociology M231) Seminar, four hours. Race, class, gender, and sexual identity are axes of stratification, identity, and experience. They are not merely identities but structural locations that are often taken for granted and rarely confronted, challenged, or contested. Many times one or more of these identities are recognized in multiple and intersecting ways these concepts shape society, individual life chances, and daily social interactions for African Americans. Examination of race, class, and gender inequalities as individual aspects of social life. How race, class, gender, and sexual identity shape societies and individual experiences in interaction with each other. How these inequalities shape and are shaped by social institutions, including cultural institutions, economy, and family, within context of experiences of black women and black men in contemporary U.S. Letter grading.

200H. Socio-Cultural History of Recent African American Music and Popular Culture. (4) Seminar, four hours. Predominant trend in research in African American music highlights intersection of music with social and political history. Examination of multiple and intersecting ways these concepts shape society, individual life chances, and daily social interactions for African Americans. Examination of race, class, and gender inequalities as individual aspects of social life. How race, class, gender, and sexual identity shape societies and individual experiences in interaction with each other. How these inequalities shape and are shaped by social institutions, including cultural institutions, economy, and family, within context of experiences of black women and black men in contemporary U.S. Letter grading.

CM235A. African American Art before 1900. (4) Formerly numbered CM212D.) (Same as Art History CM235A) Lecture, three hours. Detailed inquiry into works from circa 1900 of African American artists whose works provide insightful and critical commentary about major features of American life and society. Concurrently scheduled with course CM135A. S/U or letter grading.

CM235B. African American Art, 1900 to 1963. (4) Formerly numbered CM212E.) (Same as Art History CM235B) Lecture, three hours. Detailed inquiry into work of African American artists from Columbus Exposition to 1963 March on Washington within context of social, political, and cultural engagement, as well as in codification of modern black life in U.S. Concurrently scheduled with course CM135B. S/U or letter grading.

M240. Assessment and Treatment of African American Families. (3) (Same as Psychology M240) Seminar, two hours. Designed for graduate students. Course aids mental health professionals and trainees in evaluation and treatment of African American families in various forms of clinical settings, including community agencies, schools, and churches. Students are introduced to strengths and challenges of African American families and how to problem solve and develop intervention strategies for these families. Letter grading.

241. Special Topics in Afro-American Studies. (4) Lecture, four hours; discussion, one hour. Intensive research and study of major themes and issues in various areas of African-American studies. S/U or letter grading.

M256. Topics in African American Art. (4) (Same as Art History M236) Seminar, three hours. Requisite: course CM235A or CM235B. Topics in African American art from 18th century to present. May be repeated for credit with consent of graduate adviser. S/U or letter grading.

270A. Survey of Afro-American Research. (4) Seminar, three hours. Overview of research methodologies in humanities and social sciences, with firsthand reports from faculty in various fields. Introduction to research in and related to Afro-American studies and application of such research. Letter grading.


375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

596. Directed Readings and Tutorials. (4) Tutorial, to be arranged. Provides students with umbrella under which they can pursue specialized interests from which there is insufficient demand to warrant offering formal classes. S/U or letter grading.

597. Preparation for MA Comprehensive Examination. (4) Limited to graduate students. May not be applied toward MA course requirements. S/U grading.


African Studies
Interdepartmental Program
College of Letters and Science
10373 Bunche Hall
Box 951487
Los Angeles, CA 90095-1487
310-206-6571
idgpgrads@international.ucla.edu
http://web.international.ucla.edu/institute/academics/africanstudies/

Jemima Pierre, PhD, Chair
Faculty Committee
Hannah C. Appel, PhD (Anthropology)
Andrew Apter, PhD (Anthropology, History)
Judith A. Carney, PhD (Environment and Sustainability, Geography)
Edith Mukudi Omwami, PhD (Education)
Jemima Pierre, PhD (African American Studies)
Allen F. Roberts, PhD (French and Francophone Studies, World Arts and Cultures/Dance)
Paula A. Tavrow, PhD (Community Health Sciences)
Dominic R. Thomas, PhD (Comparative Literature, French and Francophone Studies)
W. Harold Torrence, PhD (Linguistics)
William H. Worger, PhD (History)

Scope and Objectives
The intellectual objective of the African Studies MA Program is to provide graduate students with the opportunity to engage in intensive study and research on Africa on an interdisciplinary basis. The program offers African area courses in a wide range of disciplines, including the fine arts, social sciences, humanities, and professional fields. A concurrent degree program is also offered where students can work for the MA in African Studies and the Master of Public Health (MPH) at the same time.

Academic flexibility draws many students to the program. Because there are more than 50 active faculty members on campus with African interest and experience in many disciplines, students have multiple options to design individualized programs suited to their specific interests.

Information on the undergraduate minor in African Studies can be found in the International and Area Studies section later in this catalog.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The African Studies Program offers the Master of Arts (MA) degree in African Studies. A concurrent degree program (African Studies MA/Public Health MPH) is also offered.

The African Studies Program offers the Master of Arts (MA) degree in African Studies. A concurrent degree program (African Studies MA/Public Health MPH) is also offered.
African Studies

Graduate Courses


201B. Africa and Professions. (4) Seminar, three hours. Exploration of key contributions and debates of academic disciplines in African studies, with emphasis on professional dimension. Review of discipline's literature, resources, career opportunities, and professionals themselves. Letter grading.

296. Africanist Working Group. (1) Research group meeting, one hour. Collaborative exploration and discussion of current research and literature on modern Africa. Specific projects determined by research being conducted by working group participants. Activities include designing and refining research proposals, gathering and analyzing data, and interpreting and reporting results, as well as presenting research to receive critical feedback from other class participants. May be repeated for credit. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

596. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. Limited to graduate African studies students. May be repeated, but only 4 units may be applied toward minimum graduate course requirement. S/U or letter grading.

597. Preparation for MA Comprehensive Examination. (4) Tutorial, to be arranged. Limited to graduate African studies students. Normally taken only during term in which student is being examined. May not be applied toward minimum graduate course requirement. S/U grading.

598. Research for and Preparation of MA Thesis. (4) Tutorial, to be arranged. Limited to graduate African studies students. Normally taken only during term in which student intends to complete MA thesis. May not be applied toward minimum graduate course requirement. S/U grading.

Scope and Objectives

Because UCLA possesses a substantial number of faculty members in the humanities and social sciences engaged in teaching and conducting research on American Indians, the nation's first interdisciplinary MA program in American Indian Studies was established here.

The Bachelor of Arts degree and the undergraduate American Indian Studies minor provide a general introduction for students who anticipate advanced study at the graduate level in American Indian studies, ethnic studies, and the traditional disciplines or careers in research, administration, public service, and community service related to American Indian communities.

The Master of Arts program draws primarily on existing courses in the participating departments, where research and research methodologies are of primary concern. Students are exposed to Indian-related research in a number of different disciplines; demonstration of research skills is required. Students graduate with the training they need to teach Native American studies, to serve in an administrative capacity in Indian programs or organizations. The MA program ranks among the top Indian studies programs in the country.

Undergraduate Study

The American Indian Studies major is a designated capstone major. Seniors complete a research/service experience and participate in a tutorial where faculty members help them relate their course-derived academic experience to their original research/service efforts involving Native American communities. Through their capstone work, students demonstrate their skills at analyzing and synthesizing knowledge, show their capacity to work collaboratively with peers, and display their capacity to relate their academic research and discourse to Native American community needs and concerns. Students present their work at the academic year-end Research Symposium sponsored by the American Indian Studies Interdepartmental Program.

American Indian Studies BA

Capstone Major

The American Indian Studies BA program is designed to offer a coherent and comprehensive curriculum in American Indian cultures, societies, and contemporary issues in addition to valuable background in more traditional disciplines such as anthropology, art history, economics, education, history, law, linguistics, literature, sociology, and world arts and cultures. Students acquire a critical knowledge of the concepts, theories, and methods that have produced knowledge about American Indians in the traditional disciplines. Students are encouraged to develop a concentration—or special expertise—in these fields to accompany the major.

The curriculum encompasses the cultural, historical, political, and social experiences of Native Americans in the Americas. Through courses on Native American literature, languages, theater, and contemporary societies and through more culturally specific courses on California Indians, cultures of the Pueblo southwest, and so on, the major offers an in-depth and broad knowledge on the experience of Native Americans not only in the U.S. and Canada but in Mexico and elsewhere in Latin America as well.

Given the increasingly multicultural society of the U.S. and the economic revitalization of many Native American communities, a knowledge of American Indian studies greatly enhances the professional and scholarly contributions attainable for those seeking postgraduate degrees in various related disciplines and fields.

Preparation for the Major

Required: American Indian Studies M10 and two courses from Anthropology 9, Gender Studies 10, Political Science 40, Statistics 12. Each course must be completed with a grade of C or better.

Transfer Students

Transfer applicants to the American Indian Studies major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one introduction to American Indian studies course and two courses from culture and society, introduction to gender studies, introduction to American politics, or introduction to statistical methods.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Requirements are distributed according to certain categories to create a breadth of knowledge. Students are required to take a research methods course to become familiar with scholarly techniques of knowledge production and to critically regard academic research, as well as a course in either ethnic/race/gender relations or comparative indigenous studies. Additional courses are selected in the social sciences and humanities according to a distributional formula that encourages further specialization within either of these two broad areas while simultaneously adding additional breadth. Finally, American Indian Studies C122SL prioritizes the experiential dimension of involvement in Native American communities (either urban, reservation, or rancheria) through work that supplies service experience and/or supervised internship opportunities.

The 12 courses must fit one of the following regional emphasis patterns: (1) Native North America—eight courses, including those mentioned below and additional electives on Native North American topics or (2) indigenous peoples of the Americas—eight courses, including at least four dealing with indigenous people in Central and/or South America.

Students must complete 12 upper-division courses (48 units) as follows, with no more than 32 units from American Indian Studies courses:

1. Ten core courses (40 units), including (a)
American Indian Studies Minor

The American Indian Studies minor is designed for students who wish to augment their major program of study in the College of Letters and Science with a group of related courses from various disciplines germane to American Indian studies. The minor exposes students to Indian-related research and literature in a number of different disciplines, such as American Indian studies, anthropology, economics, history, political science, sociology, and theater.

To enter the minor, students must be in good academic standing (2.0 grade-point average), have completed 45 units, and file a petition at the American Indian Studies Center, 3220 Campbell Hall. All degree requirements, including the specific requirements for this minor, must be fulfilled within the unit maximum set forth by the College of Letters and Science.

Required Lower-Division Course (5 units): American Indian Studies M10 with a grade of C or better.

Required Upper-Division Courses (28 units):
- Seven courses selected from the following: (1) one American Indian languages and communication systems course (Anthropology C155 or Linguistics 114); (2) three history and social sciences courses from American Indian Studies C120, C121, C122SL, C130, 130, 145, C170, C175, C178, Anthropology 113Q, 113R, 114P, 114Q, 115Q, Gender Studies 130, History 149A, 149B, 157B, Sociology M161; (3) three humanistic perspectives on language and expressive culture courses from American Indian Studies 180, Art History 137, C139A, English 106, 180, Ethnomusicology 106A, 106B, Theater 103F.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor, and at least 16 units applied toward the minor must be taken in residence at UCLA. Transfer credit for any of the above is subject to approval; consult with the interdepartmental adviser before enrolling in any courses for the minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. No more than two independent studies courses (199s) may be applied toward the degree.

Honors Program

The honors program is designed for American Indian Studies majors who are interested in carrying out an independent research project that culminates in an interdepartmental honors thesis of approximately 30 pages. The program gives qualified students the opportunity to work closely with individual professors on an in-depth supervised research and writing project.

All junior and senior American Indian Studies majors who have a cumulative grade-point average of 3.0 or better and at least a cumulative GPA of 3.5 in coursework in the major are eligible to apply. Consult the student affairs officer for more information.

To qualify for graduation with honors, students must (1) complete all requirements for the major, (2) have a cumulative grade-point average of 3.5 or better in the major course requirements and an overall GPA of 3.0 or better, and (3) complete American Indian Studies 198A-198B-198C, taken with a professor who agrees to mentor and guide them through the stages of senior essay design and development during their senior year. Completion of a senior thesis is required.

American Indian Studies Minor

American Indian Studies M161, (b) two language courses from Anthropology M130, C155, Linguistics 114, (c) two history or law courses from American Indian Studies 140, 158, C170, History 149A, 149B, 157B, (d) one social sciences course from American Indian Studies C120, C121, C130, C175, C178, Anthropology 160A, or 162, (e) two expressive culture courses from American Indian Studies 180, Art History 137, C139A, C139B, English 106, Ethnomusicology 106A, 106B, Theater 103F, 107, (f) one methodology course from Anthropology 138P, Art History 100, Community Health Sciences 181, Comparative Literature 100, Ethnomusicology 180, Linguistics 160, Political Science 170A, Sociology 106A, 113, or World Arts and Cultures 195, and (g) either one ethnic/race/genre course (American Indian Studies M164, Anthropology M145Q, 145S, Asian American Studies 130A, M130B, M130C, 131A, 132A, 133, 134, Chicana and Chicano Studies CM182, Film and Television 128, Gender Studies 130, 168, Sociology 154, 156, or M162) or one comparative indigenous studies course (Anthropology 143, Geography M131, History 135A, or Sociology 157)

2. American Indian Studies C122SL (experiential service learning or supervised internship)

3. American Indian Studies 199C (capstone course)

Each course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. No more than two independent studies courses (199s) may be applied toward the degree.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The American Indian Studies Program offers the Master of Arts (MA) degree in American Indian Studies. A concurrent degree program (American Indian Studies MA/Law JD) is also offered.
C145. Contemporary Indigenous Nations. (4) Seminar, three hours. Introduction to topics on contemporary indigenous nations, including social movements, social and cultural change and continuity, nation building, law and justice relations, economic development, education, international relations, comparative policy, colonialism, migration, national and social identities, and other issues and social-cultural processes, seen as distinct from ethnicity, race, class, and gender. Emphasis on indigenous communities that have maintained self-government, territory, and culture. Investigation and search for analytic and policy patterns that give greater understanding to current conditions and social and cultural processes of indigenous nations. Concurrently scheduled with course C245. Letter grading.

C158. Nation Building. (4) Lecture, three hours; fieldwork/research, nine hours. Limited to junior/senior American Indian Studies majors. Examination of historical interplay of federal policies with tribal cultures that has shaped political development of American Indian tribal nations. Current developments within Indian nations, including restructuring government, developing economies, and asserting cultural sovereignty to health, study, and required community-based projects. Letter grading.

M161. Comparative American Indian Societies. (4) (Same as Sociology M161.) Lecture, three hours. Requisite: course M10 or Sociology 1, Comparative and historical methods, economic and cultural change in indigenous North American societies. Several theories of social change, applied to selected case studies. Letter grading.

M162. Language Endangerment and Linguistic Revitalization. (4) (Same as Anthropology M156.) Lecture, three hours; activity, one hour. Requisites: course M10 or Anthropology 1. Examination of causes and consequences of worldwide loss of linguistic diversity and revival of kinds of efforts that members of threatened heritage language communities have produced in their attempt to revitalize these languages. Projected loss of as many as half of world’s languages by end of 21st century can only be explained as outcome of such factors as nationalism, global economic forces, language ideological change, and language shift away from smaller indigenous and tribal languages. Since loss of such languages means both reduction of cultural as well as linguistic diversity, many affected communities have engaged in various language revitalization efforts. Emphasis on some diverse strategies that have been attempted, including immersion, language and culture classes, master-apprentice, interactive multimedia, mass media approaches, international cooperation, and other innovative methods for revitalization. Evaluation of effectiveness of these measures and of very imagery used to discuss language endangerment. P/NP or letter grading.

CM168. Healthcare for American Indians. (4) Formerly numbered C168.) (Same as Health Policy M168.) Lecture, two hours; discussion, one hour. Identification of traditional health beliefs, health practices, and healthcare systems of American Indian tribes to understand role of U.S. government in healthcare for American Indians. Description of health problems that have affected American Indian people and definition of contemporary health issues and means of improving health status of American Indian people. Concurrently scheduled with course C268. Letter grading.

C170. California Indian History. (4) Lecture, four hours. Introduction to overview of California Indian past that includes social movements, economic development, education, international relations, international law, education, international relations, religion, gender studies, and other issues and social-cultural processes of American Indian and California sites. Concurrently scheduled with course C278. Letter grading.

C178. California Experiences in Native Cultural Resource Management. (4) Seminar, three hours. Exploration of creation and implementation of laws that affect cultural resource management in California, such as California Environmental Quality Act (CEQA), Native American Graves Protection and Repatriation Act (NAGPRA), and Native American Religious Freedom Act, National Environmental Policy Act (NEPA), and National Historic Preservation Act (NHPA), from applied standpoint. Emphasis on understand goals and challenges of these laws, examination of series of cases from California sites. Concurrently scheduled with course C278. Letter grading.

180. Introduction to and Practicum in Native American Languages. (4) Lecture, three hours; laboratory, one hour. Development of ability to converse, read, and write at elementary level in Native American languages. Introduction to both phonological and grammatical structures, vocabulary, and cultural patterns of using language as symbolic guide to culture. May be repeated with language change and approval of interdepartmental chair. Letter grading.

M186. Indigenous Film. (5) (Same as World Arts and Cultures M157.) Lecture, four hours. Introduction to study of indigenous filmic images and representations, with focus on selected ethnographic, documentary, animated, and feature films ranging from 1920 to present. Concurrently scheduled with course C278. Letter grading.

187. Special Topics in American Indian Studies. (4) Lecture, four hours. Variable topics selected from following: Myth and Folklore of Indian Societies; Contemporary American Indian Literature, Social Science Perspectives of American Indian Life; Law and American Indian; History of American Indians (cultural area); Dance and Music of American Indians (cultural area). Concurrently scheduled with course C278. Letter grading. Tutorial, one hour; fieldwork, eight hours. Limited to juniors/seniors. Introduction in supervised setting in community agency. Students meet on regular basis with instructor and provide periodic reports on their experience. Required: successful completion of honors thesis or comprehensive research project under direct supervision of faculty mentor. Each course may be repeated for credit. Letter grading.

195. Community Internships in American Indian Studies. (4) Tutorial, two hours; fieldwork, eight hours. Requisite: course M10. Limited to juniors/seniors. Internship in supervised setting in community agency. Students meet on regular basis with instructor and provide periodic reports on their experience. Required: successful completion of honors thesis or comprehensive research project under direct supervision of faculty mentor. Each course may be repeated for credit. Letter grading.

195CE. Comparative Approaches to Community and Corporate Internships. (4) (Same as African American Studies M195CE, Asian American Studies M195CE, Chicana and Chicano Studies M195CE, and Gender Studies M195CE.) Tutorial, one hour; fieldwork, eight to 10 hours. Limited to juniors/seniors. Internship in corporate, governmental, or non-profit setting coordinated through Center for Community Learning. Comparative study of race, gender, and diversity in relation to contemporary workplace dynamics. Students complete weekly written assignments, attend bimonthly meetings with graduate student coordinator, and write final research paper. Faculty sponsor and graduate student coordinator coordinate series of assignments that examine issues related to internship site. Individual contract with supervising faculty member required. P/NP or letter grading.

196A-198B. Honors Research in American Indian Studies. (4-4-4) Tutorial, one hour; activity, three to eight hours. Enforced prerequisite to 198B, which is enforced prerequisite to 198C. Limited to senior honors program students. Development and completion of honors thesis or comprehensive research project under direct supervision of faculty member. Each course may be repeated for credit. Individual contract required. Letter grading.

199. Directed Research or Seminar in American Indian Studies. (2 to 8) Tutorial, one hour. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Credit may be repeated for credit. Individual contract required. Letter grading.

199C. Individual Studies: Capstone Synthesis. (4) Tutorial, three hours. Preparation: successful completion of eight-chief-divisionals needed to complete senior American Indian Studies majors. Faculty members help students relate their course-derived academic experience to their original research/service efforts involving Native American communities. Completion of research paper and presentation of student work at year-end Research Symposium required. Must be taken in conjunction with American Indian Studies C129S, or an alternative upper-division course approved by program chair and academic coordinator. Individual contract required. Letter grading.

Graduate Courses

M200A. Advanced Historiography: American Indian Peoples. (4) (Same as History M200W.) Lecture, nine hours; seminar, nine hours. Introduction to culture-histories of North American Indians and review of Indian concepts of history. Stereotypical approach to content and methodologies related to Indian past that is interdisciplinary and multicultural in its scope. Letter grading.

M200B. Cultural World Views of Native America. (4) (Same as English M266.) Seminar, three hours. Exploration of written literary texts from oral cultures and other expression cultural forms—dance, art, song, religious and medicinal ritual—in selected Native American societies, as these traditional and tribal contexts have been translated into contemporary literary texts (fiction, poetry, essay, and drama). Survey, from secondary sources, of interdisciplinary methodological approaches taken from literary analysis, structural anthropology, folklore, linguistics, and ethnomusicology. May be repeated for credit with instructor and/or topic change. Letter grading.

M200C. Contemporary Issues of American Indian History. (4) (Same as Public Policy M244P and Sociology M275S.) Seminar, three hours. Introduction to most important issues facing American Indians as individuals, communities, tribes, and organizations in contemporary society, world, and U.S. Enforced prerequisite to 198C. Limited to juniors/seniors. Concurrently scheduled with course C200A and cultural and expressive experience of American Indians presented in course M200B. Letter grading.

M200D. Economic Principles and Economic Development in Indigenous Communities. (4) (Same as Public Policy M270.) Seminar, two hours; discussion, one hour. Limited to graduate students. Introduction to basic economic concepts and their application to issues of economic development in indigenous communities. Coverage of microeconomic and macroeconomic aspects of economic development using current and existing research. Letter grading.

201. Topics in American Indian Studies. (4) Discussion, three hours. S/U or letter grading.

202. Qualitative Research Design and Methodology for Indigenous Communities. (5) (Same as Health Policy M202 and Nursing M221.) Seminar, three hours. Introduction to some key theoretical themes in American Indian studies and exploration of methods that can be used to incorporate them in research on American Indian cultures, societies, languages, and other issues. Quantitative methods (design, appropriate use), with emphasis on qualitative research methods, ethics, and special considerations in conducting research in American Indian country. Development of research questions and exploration of feasibility of researching topics. Letter grading.
C220. Working in Tribal Communities: Introduction. (4) Lecture, four hours. Through readings, discussion, and Native guest lecturers, students learn to participate within Native American communities engaged in political, social, and cultural processes of change and preservation. Development of proposal for Native nation-building project. Concurrently scheduled with course C120. S/U or letter grading.

C221. Working in Tribal Communities: Preparing for Fieldwork. (4) Lecture, four hours. Through readings, discussion, and Native guest lecturers, students are prepared for project participation, introduction to rules of conduct and skills necessary to successfully work or carry out community service projects for Native American communities and organizations. Concurrently scheduled with course C121. S/U or letter grading.

C222SL. Working in Tribal Communities: Service Learning. (4) Seminar, one hour; fieldwork, four hours. Enforced requisite course C221. Recommended: course C220. Participation in community service learning project within Native American communities and organizations where students are mentored and supported by faculty members, other students, and project directors toward completing assigned service learning tasks and contributing to project activities. May be repeated with consent of instructor. Concurrently scheduled with course C122SL. S/U or letter grading.

C228A-228B. Tribal Legal Systems. (C228A: 3 or 4, C228B: 1 or 2) Formerly numbered M228A. Seminar, two hours. Course C228A is enforced requisite to C228B. Study of contemporary legal systems of Native American tribal nations. Detailed examination of several different tribal systems, including Navajo, Cherokee, Iroquois, and Hopi, with emphasis on diversity of tribal legal regimes, comparisons with Anglo-American legal system, changes in tribal systems during period of contact with non-Indians, and relationships between tribes' legal systems and other aspersions, such as religion and social structure. Independent research paper with focus on contemporary or historic topic required. Concurrently scheduled with Law 528. In Progress (C228A) and S/U or letter (C228B) grading.


C238A-238B. Tribal Legal Development Clinic. (C238A: 3 or 4/238B: 1 or 2) Formerly numbered M238A. Lecture, three hours. Course 238A is enforced requisite to 238B. Students provide pro-bono legal assistance to Indian nations. Projects include development and modification of tribal legal codes and constitutional provisions, creation of tribal dispute resolution processes, and drafting of intergovernmental agreements. Legislative drafting and cross-cultural representation skills emphasized. Faculty members meet with tribal leaders to inform them of available resources, and faculty members and students work with tribes to design and implement clinics that could assist them with their legal development needs. Once students are assigned to particular projects, they meet with relevant tribal officials and community leaders and advisors to develop goals and challenges of these laws, examination of specific case studies, and other discussions that meet tribal intentions and needs. Concurrently scheduled with Law 728. In Progress (238A) and S/U or letter (238B) grading.

C245. Contemporary Indigenous Nations. (4) Seminar, three hours. Discussion to topics on contemporary indigenous nations, including social movements, social and cultural change and continuity, nation building, law and justice relations, economic development, and community development. Participatory, comparative, policy, and socialization, international relations, comparative policy, colonialism, migration, national and social identities, and other issues and social, cultural processes, seen as distinct from ethnicity, race, class, and nation, with focus on indigenous communities that have maintained self-government, territory, and culture. Investigation and search for analytic and policy patterns that give greater understanding and knowledge about current conditions and social and cultural processes of indigenous nations. Concurrently scheduled with course C145. S/U or letter grading.

C261. Comparative Indigenous Societies. (4) Lecture, two hours; discussion, two hours. Designed for graduate students. Investigation of detailed historical and contemporary ethnographic analyses of social change and development in indigenous nations, primarily of U.S., but elsewhere also. Discussion of theories of change, comparative methodologies, and case materials. Letter grading.

265. Federal Indian Law I. (4 or 6) Lecture, three to four hours. Study of Indian country, Indian law, including nature and history of tribal federal legal and political relationship; basic legal definitions within federal Indian law (such as what is Indian country); equal protection issues posed by federal Indian legislation; canons of construction unique to Indian law; tribal sovereignty and its protection; basic questions of federal and state authority within Indian country; and tribal use in community, according to default rules as well as special statutory regimes. May be concurrently scheduled with Law 267. S/U or letter grading.

M265A-265B. Federal Indian Law I. (1 to 8 each) (Same as Law M382.) Seminar, three hours. M265A is enforced requisite to 265B. Overview of federal Indian law through study of cases and historical and contemporary materials. Basic conflicts among sovereign governments that dominate this area of law, especially conflicts over criminal, civil, adjudicative, and regulatory jurisdiction. Special attention to status and sovereign powers of Indian nations as determined by federal Indian law enforcers. Emphasis, and equal protection issues posed by federal and state legislation settling out Indian nations and tribal members. Federal statutory regimes regulating tribal gaming and child welfare included. Students gain critical understanding of basic tenets of Indian law, bases of tribal sovereignty, structure of federal-tribal relationship and its history, and sense of future directions courts, tribes, and Congress may take in addressing current legal issues in Indian country. In Progress (M265A) and S/U or letter (265B) grading.

M267. Federal Indian Law II. (1 to 8) (Same as Law M382.) Lecture, two hours; discussion, two hours. Enforced requisite to 267B. Examination of principles and doctrines of federal Indian law as applied to property rights in land, cultural resources, hunting and fishing rights, water rights, and economic development. Special jurisdictional regimes established by federal statutes, such as Indian Child Welfare Act and Indian Gaming Regulatory Act, addressed. S/U or letter (267B) grading.

M267A-267B. Federal Indian Law II. (1 to 8 each) (Same as Law M382.) Lecture, three hours. Required sites: courses 238A and 238B, or M265A and 265B. Examination in depth of principles and doctrines of federal Indian law as applied to property rights in land, cultural resources, hunting and fishing rights, water rights, and economic development. Special jurisdictional regimes established by federal statutes, such as Indian Child Welfare Act and Indian Gaming Regulatory Act, addressed. In Progress (M267A) and S/U or letter (267B) grading.

C268. Healthcare for American Indians. (4) Lecture, two hours; discussion, one hour. Identification of traditional health beliefs, health practices, and health care systems of American Indian tribes to understand role of U.S. government in health care services for Indians. Focus on Federal Indian Health Service and Tribal/Urban Indian Health programs and development of Indian Healthcare System and Tribal/Urban Indian Health programs to understand health problems that have affected American Indian people and definition of contemporary health issues and measures taken to raise health status of American Indian people. Concurrently scheduled with course CM168. Letter grading.

C270. California Indian History. (4) Lecture, four hours. Introduction to overview of California Indian history, specific tribal community histories, and/or contemporary California through readings, discussion, and Native guest lecturers. May be repeated for credit with topic change and consent of interdepartmental chair. Concurrently scheduled with courses C271S and S/U grading.

M272. Seminar: Cultural Property Law. (3 or 4) (Same as Law M514.) Seminar, three hours, Exploration of identity, ownership, appropriation, and repatriation of both tangible and intangible cultural property—those items that are of great significance to cultural heritage and cultural survival of people. Consideration of importance of preservation of cultural property as means of maintaining group identity, self-determination, and collective rights. Examination of both international and domestic law governing these issues, addressing such questions as How should cultural property be defined? Can cultural property by protected under existing intellectual property and cultural property regimes? How can we balance protection of cultural property against need or desire for its use in the scientific process? What is the future of cultural property? In Progress (M267) and S/U or letter grading.

274. Good Native Governance. (4 or 6) Seminar, three hours. Examination of legal issues integral to governance that Native American nations face in 21st century, including those that impinge on political, legal, economic and cultural sovereignty, economic development, constitutional reform, membership criteria, cultural property protection, sacred sites, religious freedom, and safety issues. Examination of cultural property by protected under existing intellectual property and cultural property regimes? How can we balance protection of cultural property against need or desire for its use in the scientific process? What is the future of cultural property? In Progress (M267) and S/U or letter grading.

C275. Cultures of Native Southern California. (4) Lecture, three hours. Introduction to Southern California indigenous societies through readings, discussion, guest lectures, and direct community participation. May be repeated for credit. S/U grading.

C278. California Experiences in Native Cultural Resource Management. (4) Seminar, three hours. Exploration of creation and implementation of laws that affect cultural resource management in California, such as California Environmental Quality Act (CEQA), Native American Graves Protection and Repatriation Act (NAGPRA), AB 978 (California NAGPRA), American Indian Religious Freedom Act, National Environmental Policy Act (NEPA), and the National Historic Preservation Act (NHPA), from applied standpoint. To understand goals and challenges of these laws, examination of series of cases from California sites. Concurrently scheduled with course CM175S. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

Scope and Objectives
The medical student program in the Department of Anesthesiology and Perioperative Medicine focuses on the delivery of perioperative care to surgical patients. During their training in the department, students develop clinical skills of medical management of surgical patients, techniques of monitoring and invasive line placement, and airway management skills. They are assigned to work with an attending anesthesiologist and/or anesthesia resident on a daily basis in one of the operating room locations and participate in the preoperative evaluation and preparation of their patients and development of an anesthetic plan. Students then observe how to prepare for and execute their anesthetic plan. They have opportunity to perform procedures as their abilities and the situation permit. In addition, the department’s Human Patient Simulator provides students with a simulated operating room setting where a variety of clinical situations are initiated so they can practice their clinical skills. Students are also expected to attend clinically oriented lectures on a wide range of anesthesia topics, including physiology, pharmacology, and critical care.

For more details on the Department of Anesthesiology and Perioperative Medicine and a listing of the courses offered, see the department website.

Anesthesiology
Upper-Division Course
199. Directed Research in Anesthesiology. (2 to 6)
Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

ANTHROPOLOGY

Chair
Stephen B. Acabado, PhD

Vice Chair, Research
Jeanne E. Arnold, PhD

Vice Chair, Education
Akhil Gupta, PhD

Professor Emeriti
Yunxiang Yan, PhD

Adjunct Professor
Salih Can Aciksoz, PhD

Adjunct Associate Professors
Erica A. Cartmill, PhD

Adjunct Associate Professors
Erin K. Debenport, PhD

Adjunct Associate Professors
Molly M. Fox, PhD

Adjunct Professor
Kevin J. Vaughn, PhD

Adjunct Associate Professors
Robert B. Lemelson, PhD

Adjunct Assistant Professors
Tritza Reyes-Quintero, PhD

Adjunct Assistant Professors
Thomas A. Wake, PhD

Scope and Objectives
Anthropology, the broadest of the social sciences, is the study of humankind. One of the strengths of anthropology as a discipline is its holistic or integrative approach; it links the life sciences and the humanities and has strong ties with disciplines ranging from biology and psychology to linguistics, political science, and the fine arts. Anthropological study is appropriate for people with a wide variety of interests: human cultures and civilizations both past and present, human and animal behavior, particular regions of the world such as Africa, Asia, Latin America, Oceania, etc.

The Department of Anthropology recognizes the following four fields in anthropology:

Archaeology: the study of human cultures and the natural, social, ideological, economic, and political environments in which they operated in the recent and distant past. The graduate and undergraduate programs focus on methods of discovery (field and laboratory courses), strategies of analysis pertaining to long-term cultural evolution (theory, analytic, and topical courses), and the unfolding of prehistory in many regions of the world, including North America, Mesoamerica, South America, and several parts of the Old World (regional courses). Faculty members have long-standing interests in the origins and evolution of complexity, including early human adaptations, the political organization of complex hunters/gatherers, the origins of early village life, and the emergence and florescence of ancient cities and states. Faculty members maintain programs of field research involving many students in North America, Mesoamerica, South America, and East and South Asia.

Biological anthropology is the study of humans and other primates from a Darwinian point of view. The program focuses on the evolutionary ecology of early hominids, extant primates, and contemporary humans and includes training in evolutionary theory, behavioral ecology, evolutionary psychology, paleoanthropology, paleoecology, primate behavior, and mathematical modeling. Faculty members associated with the program have engaged in fieldwork in Africa, Central America, and Southeast Asia where ongoing projects include work on primate behavior, hominid evolution, and evolution psychology.

Linguistic anthropology is an interdisciplinary field that addresses the manifold ways in which language, interaction, and culture mutually organize each other in different communi-
ties worldwide. Linguistic anthropologists at UCLA have a variety of backgrounds and research interests that lead them to focus on communication, language contact and change, language and politics, language socialization across the lifespan, verbal art and performance, and the relation of language to ideology, mind, emotion, and identity. Courses are offered in ethnographic approaches to discourse analysis, field methods, language ideology, conversation analysis, language socialization, and communication in urban communities, as well as on cross-cultural language practices.

Sociocultural anthropology concerns the examination and understanding of social and cultural systems and processes, and the human capacities that enable them. Its goal is to understand their operation in specific settings and to understand the experience of individuals who live in these diverse systems. Faculty members have engaged in fieldwork in almost every area of the world, but most notably in Africa, Latin America, East and South Asia, and Oceania. They have also engaged in ethnographic research among Americans with diverse ethnic identities and in various institutional settings.

Bridging the four primary subfields are several other dimensions of anthropological study, including psychocultural anthropology and medical anthropology. Courses are also offered in the history and theory of anthropology and a wide range of anthropological methods.

The department offers Bachelor of Arts and Bachelor of Science degrees and a minor in Anthropology for undergraduate students; the graduate program leads to the Master of Arts and PhD degrees. Studies in anthropology are particularly valuable for students planning careers in which an understanding of human behavior and cultural diversity is desirable, such as business, education, law, medicine, nursing, public health, social welfare, and urban planning. Because of its breadth of outlook, anthropology also offers an ideal basis for those seeking a general education in our increasingly interdependent world.

Undergraduate Study

Anthropology BA

Preparation for the Major

Required: Anthropology 1, 2, 3, 4; Chemistry and Biology 1AC, 1AB, 14BL, and 14C; Math 20A, 20B, 20L; 30A and 30AL; Statistics 110Q, 111, 117, 126P, 135, 135P, 138B, 138Q, 138R, 151, 151L, 151S, 151O, 152, 152S, 153, 153S, 153O; and Life Sciences 30A, 30B, and 31B. Students must also complete one of the following introductory courses: either Life Sciences 1, 2, 3, 4, and 23L OR 7A, 7B, 7C, and 23L. They may not substitute courses in either sequence. Each course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better.

Transfer Students

Transfer applicants to the Anthropology BA major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one human evolution course, one archaeology course, one sociocultural anthropology course, and one culture and communication course.

Transfer to the Anthropology BA major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one human evolution course, one archaeology course, one sociocultural anthropology course, one culture and communication course, two general biology courses for majors, one year of calculus, one year of general chemistry with laboratory, one year of general physics with laboratory, and one lower-division organic chemistry course.

Transfer to the Anthropology BA major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one human evolution course, one archaeology course, one sociocultural anthropology course, one culture and communication course, two general biology courses for majors, one year of calculus, one year of general chemistry with laboratory, one year of general physics with laboratory, and one lower-division organic chemistry course.

The Major

The major is designed for students interested in an anthropological understanding of human behavior. One of the strengths of anthropology is its cross-cultural holistic and integrative approach with many fields, such as biology, history, linguistics, the social sciences, and many of the humanities.

To gain a comprehensive understanding of the discipline as a whole, students must take two courses in the sociocultural anthropology field and one course in each of the other three fields (see Scope and Objectives). Students may take any upper-division course in the given area to fulfill this requirement. Each course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better.

Students must complete 11 courses (44 to 52 units) as follows: (1) two upper-division courses in the sociocultural anthropology field and one in each of the other three fields (archaeology, biological anthropology, and linguistic anthropology), (2) one upper-division regional cultures course, (3) one upper-division history/theory course selected from 100, 110, 111, 120, 124Q, 130, 131, 136A, 140, M150, (4) one upper-division methodology course selected from 110, 117, 126P, 135, 135P, 138B, 138Q, 138R, 151, 151L, 151S, and 153.

Students are strongly encouraged to enroll in 3 to 4 units of 89 and/or 189 courses to gain small seminar experience. Ideally, at least one of the units should be at the upper-division level.

Anthropology BS

Preparation for the Major

Required: Anthropology 1, 2, 3, 4; Chemistry and Biology 1AC, 1AB, 14BL, and 14C, or Math 20A, 20B, 20L; 30A and 30AL; Mathematics 3A, 3B, 3C, 3D, and Statistics 12, or Mathematics 31A, 31B, and Statistics 12, or Life Sciences 30A, 30B, and Statistics 13; Physics 5A, 5B, and 5C.

Students must also complete one of two life sciences sequences—either Life Sciences 1, 2, 3, 4, and 23L OR 7A, 7B, 7C, and 23L. They may not substitute courses in either sequence.

Each course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better.

Transfer Students

Transfer applicants to the Anthropology BS major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one human evolution course, one archaeology course, one sociocultural anthropology course, one culture and communication course, two general biology courses for majors, one year of calculus, one year of general chemistry with laboratory, one year of general physics with laboratory, and one lower-division organic chemistry course.

The Major

The major supplies an overview of human evolution and is designed to prepare students for careers in anthropology and the health sciences, including medicine, dentistry, public health, and nursing. Each course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better.

Students must complete nine courses as follows: (1) two upper-division courses in the sociocultural anthropology field and one in each of the other three fields (archaeological, biological anthropology, and linguistic anthropology), (2) one upper-division regional cultures course, (3) one upper-division history/theory course selected from 100, 110, 111, 120, 124Q, 130, 131, 136A, 140, M150, and (4) two additional upper-division anthropology courses.

Students are strongly encouraged to enroll in 3 to 4 units of 89 and/or 189 courses to gain small seminar experience. Ideally, at least one of the units should be at the upper-division level.

Honors Program

The honors program provides research-oriented students with opportunity to engage in original research and analysis under the close supervision of faculty members and culminates in an honors thesis. To be admitted students should have a cumulative grade-point average of 3.0 overall and a 3.5 cumulative GPA in their upper-division anthropology courses. The application for admission must be submitted during fall quarter. Ideal candidates should have junior or senior standing and have completed at least two upper-division anthropology courses. The proposal, research, analysis, and writing of the paper take place over four terms via Anthropology 191HA through 191HD. Course 191HA is taken in winter quarter and 191HB in spring quarter. Research should be done in summer, and courses 191HC and 191HD are taken in fall and winter quarters of the graduation year. Students should contact the departmental honors adviser early in their studies for more information.

Anthropology Minor

Students who wish to take a series of courses in anthropology, but major in another discipline, may be interested in the Anthropology minor. Students select courses from the four fields within anthropology (archaeological, biological anthropology, sociocultural anthropology), although they are encouraged to focus the body of their coursework within one field.

To enter the minor, students must have an overall grade-point average of 2.0 or better.

Required Lower-Division Courses (10 units): Two courses from Anthropology 1, 2, 3, 4.

Required Upper-Division Courses (20 units minimum): Core course (Anthropology 111, 120, 130, 140, or M150) from one of the four anthropology fields listed above; four additional courses. Students are encouraged to concentrate their upper-division coursework within one field and are required to consult with
the undergraduate adviser in planning their program of study. A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Anthropology offers Master of Arts (MA) and Doctor of Philosophy (PhD) degrees in anthropology.

Anthropology

Lower-Division Courses

1. Human Evolution. (5) (Formerly numbered 7.) Lecture, three hours; discussion, one hour. Required as preparation for both bachelor's degrees. Evolutionary processes and evolutionary past of human species. P/NP or letter grading.

2. Archaeology: Introduction. (5) (Formerly numbered 8.) Lecture, three hours; discussion, one hour; one field trip. Required as preparation for both bachelor's degrees. General survey of field and laboratory methods, theory, and major findings of anthropological archaeology, including case-study guest lectures presented by several campus archaeologists. P/NP or letter grading.

3. Culture and Society. (5) (Formerly numbered 9.) Lecture, three hours; discussion, one hour; fieldwork. Required as preparation for both bachelor's degrees. Introduction to study of culture and society in comparative perspective. Examples from societies around world to illustrate basic principles of formation, structure, and distribution of human institutions. Of special concern is contribution and knowledge that cultural diversity makes toward understanding problems of modern world. P/NP or letter grading.

4. Culture and Communication. (5) (Formerly numbered 33.) Lecture, three hours; discussion, one hour. Required as preparation for both bachelor's degrees. Introduction to study of communication from anthropological perspective. Formal linguistic methods compared with ethnographically oriented methods focused on context-bound temporal unfolding of communicative activities. Topics include language in everyday life and ritual events, socialization, literacy, multilingualism, miscommunication, political discourse, and art-making as cultural activity. P/NP or letter grading.

Upper-Division Courses

Archaeology

100. History of Anthropology. (4) (Formerly numbered 182.) Lecture, three hours. Brief survey of development of Western social science, particularly anthropology, from Greek and Roman thought to emergence of evolutionary theory and concept of culture in late 19th and early 20th centuries. May be repeated for credit with topic change. P/NP or letter grading.

110. Principles of Anthropology. (4) (Formerly numbered 110Q.) Lecture, three hours; discussion, one hour (when scheduled). Requisite: course 2. 100 or 200. Introductory to study of culture and society in preparation for both bachelor's degrees. Evolutionary theory and concept of culture in archaeology to implement them and to appreciate and evaluate results of their use by others who have embedded them in their scholarly publications or theoretical models. Systematic instruction in digital data management and mining, scientific analysis of materials (including geological and biochemical techniques), and visual presentation of data and research results (ranging from simple graphs to virtual reality). Concurrently scheduled with course CM110Q. P/NP or letter grading.

111. Theory in Anthropological Archaeology. (4) Lecture, three hours. Requisite: course 2. Method and theory with emphasis on archaeology within context of anthropology. Topics include philosophy of archaeology, history and development of long-term human occupation, and selective survey of work on problems of general anthropological interest. P/NP or letter grading.

112F. Selected Topics in Historical Archaeology. (4) Lecture, three hours. Study of selected topics in historical archaeology. Consult Schedule of Classes for topics and instructors. May be repeated for credit with topic change. P/NP or letter grading.

112G. Archaeology of Chiefdoms. (4) (Formerly numbered 114L) Lecture, three hours. Requisite: course 2. Examination of chiefdom societies in anthropological record, with readings focused on theory and data from archaeological, historical, and ethnographic literature. Illustration of how people in ranked non-state societies created remarkably rich cultures over long periods of time. May be repeated for credit with topic change. P/NP or letter grading.

112R. Cities Past and Present. (4) (Formerly numbered 119P.) Lecture, three hours. Requisite: course 2 or 3. Pre-Hispanic and early Spanish writing. P/NP or letter grading.

112S. Politics of Past. (4) (Formerly numbered 115Q.) Lecture, three hours. Requisite: course 2. Examination of social and cultural context of modern archaeology. Topics include legal frameworks governing archaeological practice, relationships between archaeologists and descendant peoples, and role of archaeology in current politics. P/NP or letter grading.

113P. Archaeology of North America. (4) Lecture, three hours. Study of archaeology of North American Indians; evolution of Indian societies from earliest times to (and including) contemporary Indians; approaches and methods of American archaeology. P/NP or letter grading.

113Q. California Archaeology. (4) Lecture, three hours. From earliest Californians through 10,000 years of history, study of diversity in California's original peoples. Aspects of technology, ideology, ecology, and sociopolitical organization; effects of cultural and social impacts on California Indians by Euro-Americans. P/NP or letter grading.

113R. Southwestern Archaeology. (4) Lecture, three hours. Study of emergence of urban and non-urban Southwestern societies from 11,000 years ago to historic times. Emphasis on describing and explaining cultural variation and change, employing evolutionary perspective. P/NP or letter grading.

114F. Ancient Civilizations of Mesoamerica. (4) Lecture, three hours. Archaeology of pre-Hispanic native cultures of Mesoamerica from late Pleistocene through Spanish conquest, with emphasis on former sociopolitical developments, classic civilization, and Aztec society as revealed by archaeology and early Spanish writing. P/NP or letter grading.

114G. Ancient Civilizations of Andean South America. (4) (Formerly numbered 114R) Lecture, three hours. Requisite: course 1. 114F or 114Q. Continued survey of pre-Hispanic and Spanish conquest period native cultures of Andean South America, as revealed by archaeology and early Spanish writing. Incas and their predecessors in Peru, with emphasis on political systems, economic patterns, religion, and aesthetic and intellectual achievements. P/NP or letter grading.


116P. Archaeology of South Asia. (4) (Formerly numbered 116.) Lecture, three hours. Archaeology of Harappan, early historic, and medieval periods in Indian subcontinent. Investigation of large-scale social movements such as Buddhism, as well as consideration of how past is interpreted in present. P/NP or letter grading.

116Q. Selected Topics in Archaeology of China. (4) (Formerly numbered 116N.) Lecture, three hours. Study of current developments and key issues in archaeology of early Chinese civilizations. Consult Schedule of Classes for topics and instructors. May be repeated for credit with topic change. P/NP or letter grading.

M116R. Archaeological Landscapes of China. (4) (Formerly numbered 116S.) (Same as Chinese M183.) Lecture, three hours; discussion, one hour (when scheduled). Declassified space images from Cold War era and open remote sensing data of 21st century provide new opportunities for studying landscape transformation in historical China. Combining lectures, library research, and hands-on analysis of archaeological sites on satellite images, investigation of changing historical and archaeological landscape in China during last 5,000 years. Social processes at various scales, from emergence of state to rise of metropolitan centers and formation of imperial landscapes. P/NP or letter grading.

118S. Selected Topics in Archaeology of Southeast Asia. (4) Lecture, three hours. Study of selected topics in archaeology and prehistory of Southeast Asia from Pleistocene to European colonization, including population movements, emergence of agriculture, and development of state level societies. May be repeated for credit with topic change. P/NP or letter grading.

117P. Selected Laboratory Topics in Archaeology. (4) Lecture, three hours. Requisite: course 8. How archaeological research is furthered by specialized analysis of particular classes of cultural remains. Topics may include animal bones, plants, ceramics, rock art. Hands-on experience working with collections and data. May be repeated for credit with topic change. P/NP or letter grading.
119. Selected Topics in Archaeology. (4) (Formerly numbered 118J.) Lecture, three hours; discussion, one hour (when scheduled). Study of selected topics in archaeology. Consult Schedule of Classes for topics and instructors. May be repeated for credit with topic change. P/NP or letter grading.


124P. Human Behavioral Ecology. (4) (Formerly numbered 124PA.) Lecture, three hours; discussion, one hour (when scheduled). Recommended requisite: course 1 or Life Sciences 1 or 7B. Survey of research in human behavioral ecology. Review of natural and sexual selection, kin selection, and reciprocal altruism. Emphasis on current empirical studies of modern human behavior from evolutionary perspective, including social organization, sexual division of labor, parenting strategies, conflict, and cooperation. P/NP or letter grading.

124Q. Evolutionary Psychology. (4) (Formerly numbered 124QB.) Lecture, three hours; discussion, one hour (when scheduled). Recommended requisite: course 1 or Life Sciences 1 or 7B. Survey of research in evolutionary psychology. Review of relevant theory in evolution and genetics. Emphasis on empirical studies of modern human behavior from evolutionary perspective, including social behavior, decision making, language, culture, and child development. P/NP or letter grading.

124R. Evolution of Language. (4) (Formerly numbered 124RA.) Lecture, three hours; discussion, one hour (when scheduled). Requisite: course 1. Limited to juniors and seniors. In-depth survey of theory and research in evolutionary linguistics. P/NP or letter grading.

124S. Evolution of Human Sexual Behavior. (4) (Formerly numbered 124SP) Lecture, three hours; discussion, one hour (when scheduled). Requisite: course 1 or Linguistics 1. Designed for juniors and seniors. How did human capacity for language evolve? Examination of origin of human language from biological, communicative, and social and cultural perspectives. Topics include evolutionary theory, linguistic structure, gesture and speech, animal communication, language learning, language disorders, and conceptual models of language emergence. P/NP or letter grading.

124T. Evolution of Personality. (4) Lecture, three hours. Requisite: course 1. Effects of evolutionary processes on a variety of human traits that involve genetic variation, mortality, fertility, mating, parenting, and relations with members of opposite sex. P/NP or letter grading.

124V. Evolution of Personality. (4) Lecture, three hours. Requisite: course 1. Examination of evolutionary processes and social behavior from evolutionary perspective. Emphasis on theories and evidence for differences between males and females in their patterns of growth, maturation, fertility, mortality, parenting, and relations with members of opposite sex. P/NP or letter grading.

125. Evolution of Personality. (4) Lecture, three hours. Requisite: course 1 or Life Sciences 1 or 7B. Discussion of the role of evolution in personality development and the formation of individual differences. P/NP or letter grading.

128P. Paleopathology. (4) (Formerly numbered 128GP) Lecture, three hours. Designed for juniors/seniors. Evidence of disease and trauma, as preserved in skeletal remains of ancient and modern human populations. Discussions of medical procedures (trepanation), health status, ethnic differentiation (cranial deformation, footbinding), cannibalism, and sacrifice and roles such activities have played in human societities. P/NP or letter grading.

129Q. Selected Topics in Biological Anthropology. (4) (Formerly numbered 130Q.) Lecture, three hours; discussion, one hour (when scheduled). Study of selected topics in biological anthropology. Consult Schedule of Classes for topics and instructors. May be repeated for credit with topic change. P/NP or letter grading.

Sociocultural Anthropology

130. Study of Culture. (4) Lecture, three hours; discussion, one hour (when scheduled). Requisite: course 3. Designed for juniors/seniors. 20th-century elaboration and development of concept of culture. Examination of major paradigms: culture as human capacity, as patterns and products of behavior, as systems of meaning and cognition, as generative structure and semantic system, as component in social action and reality construction. Core course for cultural field. P/NP or letter grading.


133. Anthropology of Food. (4) (Formerly numbered 133F.) Lecture, three hours; discussion, one hour (when scheduled). Production, consumption, and distribution of food, with particular emphasis on culture of food. Exploration of ecological history, class, poverty, hunger, ethnicity, nationalism, capitalism, gender, race, and sexuality. Food that shapes identities, desires, and needs in contemporary world. P/NP or letter grading.

133B. Field Methods in Cultural Anthropology. (5) (Formerly numbered 133B.) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Introduction to skills and tools of data attainment through fieldwork in cultural anthropology. Emphasis on techniques, methods, and concepts of ethnographic research and how basic observational information is systematized for presentation, analysis, and cross-cultural comparison. P/NP or letter grading.

133F. Fieldwork in Asian American and Pacific Islander Communities. (4) (Formerly numbered M133F) Lecture, three hours; discussion, one hour. Designed for juniors and seniors. Introduction to skills and tools of data attainment through fieldwork in cultural anthropology. Emphasis on techniques, methods, and concepts of ethnographic research and how basic observational information is systematized for presentation, analysis, and cross-cultural comparison. P/NP or letter grading.

133P. Field Methods in Cultural Anthropology. (5) (Formerly numbered 133P.) Lecture, three hours; discussion, one hour. Designed for juniors and seniors. Introduction to skills and tools of data attainment through fieldwork in cultural anthropology. Emphasis on techniques, methods, and concepts of ethnographic research and how basic observational information is systematized for presentation, analysis, and cross-cultural comparison. P/NP or letter grading.

133Q. Fieldwork in Asian American and Pacific Islander Communities. (4) (Formerly numbered M133Q) Lecture, three hours; discussion, one hour. Designed for juniors and seniors. Introduction to skills and tools of data attainment through fieldwork in cultural anthropology. Emphasis on techniques, methods, and concepts of ethnographic research and how basic observational information is systematized for presentation, analysis, and cross-cultural comparison. P/NP or letter grading.

137. Selected Topics in Cultural Anthropology. (4) (Formerly numbered 137.) Lecture, three hours; discussion, one hour (when scheduled). Study of selected topics in cultural anthropology. Consult Schedule of Classes for topics and instructors. May be repeated for credit with topic change. P/NP or letter grading.

140. Study of Social Systems. (4) (Formerly numbered 150.) Lecture, three hours; discussion, one hour (when scheduled). Enforced requisite: course 3. Introduction to more specialized social anthropology courses. Evaluation of variation in sociocultural systems, with special emphasis on forms of inequality. Basic frameworks of analytical comparison; historical context and development of sociocultural anthropology discipline. P/NP or letter grading.

142P. Anthropology of Religion. (4) (Formerly numbered 156P) Lecture, three hours. Survey of various methodologies in comparative study of religious ideology, religious action, and social behavior. Exploration of particular religions through descriptive and structural approaches, and identification of social and psychological factors that may account for variation in religious systems cross-culturally. P/NP or letter grading.
142Q. Ethnic and Religious Minorities, (4) Lecture, three hours. Analytical overview of ethnic and religious minorities in contemporary Middle East and North Africa structured around sociocultural experiences of ethnic and religious groups to understand their political and economic realities. P/NP or letter grading.

143. Economic Anthropology, (4) (Formerly numbered 133P) Lecture, three hours. Requisite: course 3. Introduces theoretical perspectives for interpretation of economic life and institutions. Economic facts to be placed in their larger social, political, and cultural contexts; examination of modes of production, distribution, and consumption of goods and services in their relation to social networks, power structures, and institutions of family, kinship, and class. P/NP or letter grading.

M144P. Constructing Race, (4) (Formerly numbered M159P) (Same as African American Studies M159P and Asian American Studies M169L) Lecture, three hours. Examination of race, socially constructed category, from anthropological perspective. Consideration of development of racial categories over time and in different regions, racial passing, multicultural identity in U.S., whiteness, race in popular culture, and race and identity. P/NP or letter grading.


C144S. Repatriation of Native American Human Remains and Cultural Objects, (4) (Formerly numbered C144) Lecture, three hours; discussion, one hour. Native Africans have recently been successful in obtaining passage of federal and state laws repatriating human remains and cultural objects to them. Examination of cultural democracy, community management, and its relationship to language change and language in its relationship to language change and language. P/NP or letter grading.

M145P. Marriage, Family, and Kinship, (4) (Formerly numbered M151J) (Same as Gender Studies M154P) Lecture, three hours. Requisite: course 3. Examination of understandings of kinship in cross-cultural perspective and impact of kinship on interpersonal relationships, gender roles, and sociocultural systems. Readings from popular materials and formal ethnographic accounts. P/NP or letter grading.

M145Q. Selected Topics in Gender Systems, (4) (Formerly numbered 154P) (Same as Gender Studies M154Q) Lecture, three hours. Recommended preparation: prior gender studies courses. Designed for junior/senior social science majors. Comparative study of women’s lives and gender systems and cultures from anthropological perspective. Critical review of relevant theoretical issues using ethnography, case study, and presentations. Consult Schedule of Classes for topics and instructors. May be repeated for credit with topic change. P/NP or letter grading.

M145R. Women and Social Movements, (4) (Formerly numbered M155Q) (Same as Gender Studies M154R) Lecture/discussion, three hours. Recommended preparation: prior gender studies or anthropology courses. Comparative studies of social movements (e.g., nationalist, socialist, liberal/reform), beginning with Russia and China and including Cuba, Algeria, Guinea-Bissau, Mozambique, Nicaragua, and Iran. Analysis of women’s participation in social transformations and centrality of gender interests. P/NP or letter grading.

145S. Culture, Gender, Sexuality, (4) (Formerly numbered M134J) Lecture, three hours. Comparative analysis of male and female experiences in structuring of patterns of gender and sexuality. P/NP or letter grading.

M145T. Women’s Voices: Their Critique of Anthropology of Japan. (4) (Formerly numbered M155S) (Same as Gender Studies M134C) Lecture, three hours. Preparation: introductory sociocultural anthropology course. Anthropology of Japan has long viewed Japan as homogeneous whole. Restoration of diversity and complexity to voice of Japanese women in various historical contexts. P/NP or letter grading.

146. Urban Anthropology, (4) (Formerly numbered 167L) Lecture, three hours; discussion, one hour (when scheduled). Requisite: course 3. Designed for juniors/seniors. Comparative study of planned and unplanned development, in particular as it affects rural societies. Emphasis on impact of capital, technological change, and gender differences, economic differentiation and class, urban/rural relations, and migration. Discussion of theoretical issues in light of case studies. P/NP or letter grading.

147. Development Anthropology, (4) (Formerly numbered 168L) Lecture, three hours; discussion, one hour (when scheduled). Requisite: course 3. Designed for juniors/seniors. Comparative study of planned and unplanned development, in particular as it affects rural societies. Emphasis on impact of capital, technological change, and gender differences, economic differentiation and class, urban/rural relations, and migration. Discussion of theoretical issues in light of case studies. P/NP or letter grading.

M148. Past People and Their Lessons for Our Own Future, (5) (Formerly numbered M158Q) (Same as Geography M153H and Honors Collegium M152L) Lecture, two hours; discussion, two hours. Examination of modern and past people that met varying fates, as background to examination of how modern sciences major. Introduction to modern industrial cities and urban life. Examination of notion of urban space in context of social relations by drawing from historical and cross-cultural urban ethnographies. Urban space is created according to needs of capital and actions of urban subjects. Exploration of ways in which class, gender, race, and geography shape or contest perceptions and priorities on urban issues. P/NP or letter grading.

150. Language in Culture. (5) (Formerly numbered M146L) Lecture, three hours; discussion, one hour (when scheduled). Requisite: course 4. Designed for juniors/seniors. Comparative study of planned and unplanned development, in particular as it affects urban societies. Emphasis on impact of capital, technological change, and gender differences, economic differentiation and class, urban/rural relations, and migration. Discussion of theoretical issues in light of case studies. P/NP or letter grading.

151. Ethnography of Everyday Speech. (5) (Formerly numbered 141L) Lecture, three hours; fieldwork. Requisite: course 4. Designed for juniors/seniors. Course has two interrelated objectives: (1) to introduce students to ethnography of communication—description and analysis of situated communicative behavior and social and cultural knowledge that reflects and (2) to train students to recognize, describe, and analyze relevant linguistic, proxemic, and kinesic aspects of face-to-face interaction. P/NP or letter grading.

152P. Language Socialization, (4) (Formerly numbered 149E) Lecture, three hours; discussion, one hour (when scheduled). Exploration of process of socialization through language, and socialization to use language across lifespan, across communities of practice within single society, and across different ethnic and socioeconomic groups. Examination of ways in which verbal interaction between novices and experts is structured linguistically and culturally. P/NP or letter grading.

152Q. Language and Social Organization through Life Cycle. (4) (Formerly numbered 149F) Lecture, three hours. Requisite: course 4. Examination of forms of participation and interaction across various phases of life cycle from birth to old age, using videotaped interactions of naturally occurring activities. How language and interaction within specific contexts are used to constitute identities and how interaction order resulting from face-to-face interaction provides building blocks for larger formations that arise from such activities. P/NP or letter grading.

152R. Language, Culture, and Education, (4) (Formerly numbered 149D) Lecture, three hours. Requisite: course 4. Examination of various ways in which culture, and language in particular, influence not only educational processes and outcomes, but also very conceptions of what normal development processes and desirable educational outcomes are. P/NP or letter grading.

153. Language and Identity, (4) (Formerly numbered 149A) Lecture, three hours. Requisite: course 4. Language and social phenomena are explored from several angles from which language use can be critically examined as integral to interactions between individuals and between social groups. P/NP or letter grading.

153L. Linguistic Diversity and Control of Identities and Histories in Contact, (4) (Formerly numbered 149C) Lecture, three hours. Requisite: course 4. Examination of communicative, political, and poetic aspects of use of two or more languages (multilingualism) by individuals and by groups. Broader themes in social theory, anthropological inquiry, sociolinguistics, and literary studies in lectures to contextualize class readings. P/NP or letter grading.

154Q. Gender and Language in Society, (4) (Formerly numbered 149B) Lecture, three hours; discussion, one hour (when scheduled). Requisite: course 4. Examination of role language plays in social construction of gender identities and ways in which gender impacts language use and ideologies. P/NP or letter grading.

154SL. Gender and Language across Communities, (4) (Formerly numbered 149SL) Lecture, three hours; discussion, one hour (when scheduled). Requisite: course 4. Examination of how language practices contribute to expression of gendered identities in different social groups and situations. Completion of 20 hours of service learning in community service project coordinated through Center for Community Learning required. Active participation in organized service that is conducted in and meets needs of communities. P/NP or letter grading.

C155. Native American Languages and Cultures. (4) (Formerly numbered C144) Lecture, three hours. Requisite: course 4 or American Indian Studies M10. Introduction and comparative analysis of sociocultural aspects of language use in Native North American Indian speech communities. Specific foci include both macro- and micro-sociolinguistic topics. Micro-sociolinguistic topics are communities as multilingualism, cultural differences regarding appropriate communicative behavior and variation within speech communities (e.g., male and female speech, baby talk, ceremonial speech, etc.). Macro-sociolinguistic considerations include language contact and its relationship to language change and language in American Indian education. Concurrently scheduled with course C255, P/NP or letter grading.

M156. Language Endangerment and Linguistic Revitalization, (4) (Formerly numbered M162L) (Same as American Indian Studies M162L) Lecture, three hours; activity, one hour. Requisites: course 4, American Indian Studies M10. Examination of causes and consequences of current worldwide loss of linguistic diversity and revelation of kinds of efforts that members of threatened heritage language communities have produced in their attempt to revitalize these languages. Projected loss of as many as half of world's
languages by end of 21st century can only be explained as outcome of such factors as nationalization, global economic forces, language ideological change, and language shift away from smaller indigenous and tribal languages. Since loss of such languages means both reduction of imagery used to discuss language endangerment, many affected communities have engaged in various language renewal practices. Examination of some diverse strategies that have been attempted, including modernization of language and culture classes, master-apprentice, interactive multimedia, mass media approaches, and language policy-reform approaches. Evaluation of effectiveness of these measures requires cultural research. The impact of cultural achievement be possible in a way analyzed, not as isolated entity, but as visible agent whose thought and action are lodged within both processes of human interaction and rich settings where people pursue courses of action that count in their lives. Satisfies Writing II requirement. Letter grading.

M157W. Talk and Body. (Formerly numbered M148W.) (Same as Communication M123W.) Lecture, three hours. Recommended requisite: course 3 or 4 or Ethnomusicology 20A or 20C. Aesthetics of jazz from point of view of musicians who shaped jazz as art form in 20th century. Listening to and interacting with professional jazz musicians who answer questions and give musical demonstrations. Analytical resources and historical knowledge of musicians and ethnomusicologists combined with those interested in jazz as cultural tradition. P/NP or letter grading.

Regional Cultures

160A. Native North Americans. (4) (Formerly numbered 172A.) Lecture, three hours; discussion, one hour. Requisite: English Composition 3. Relationship between language and human body raises host of interesting topics. New approaches to phenomena such as embodiment becomes possible in body analyzed, not as isolated entity, but as visible agent whose thought and action are lodged within both processes of human interaction and rich settings where people pursue courses of action that count in their lives. Satisfies Writing II requirement. Letter grading.

M158. Culture of Jazz Aesthetics. (4) (Formerly numbered M142R.) (Same as Ethnomusicology M130.) Lecture, three hours. Recommended requisite: course 3 or 4 or Ethnomusicology 20A or 20C. Aesthetics of jazz from point of view of musicians who shaped jazz as art form in 20th century. Listening to and interacting with professional jazz musicians who answer questions and give musical demonstrations. Analytical resources and historical knowledge of musicians and ethnomusicologists combined with those interested in jazz as cultural tradition. P/NP or letter grading.

159. Selected Topics in Linguistic Anthropology. (4) (Formerly numbered 147.) Lecture, three hours; discussion, one hour (when scheduled). Study of selected topics in linguistic anthropology. Consult Schedule of Classes for topics and instructors. May be repeated for credit with topic change. P/NP or letter grading.

160. Change and Continuity among Native North Americans. (4) (Formerly numbered 172B.) Lecture, three hours. Requisite: course 160A. Consideration of tremendous change Native American societies and cultures have undergone since European contact. Emphasis on patterns of adaptation and continuity as Native Americans confronted colonization and their implications. P/NP or letter grading.

161. Latin American Communities. (4) (Formerly numbered 173G2.) Lecture, three hours. Overview of social and cultural anthropology of small communities in Latin America. Similarities and contrasts in social organization and interpersonal relations described in context of economic, political, and cultural environments. P/NP or letter grading.

162. Ethnography of South America. (4) (Formerly numbered 174P) Lecture, three hours. Introduction to ethnography of several South American countries, with special emphasis on Lowland South America. Survey of history and development of man and society in this world area and examination of exemplary cultures significant at various levels of cultural achievement. P/NP or letter grading.

163P. Ideology and Social Change in Contemporary China. (4) (Formerly numbered 175Q) Lecture, three hours. Requisite: A survey of social and cultural changes in China from 1949 to present. Topics include ideology and politics in everyday life, social stratification and mobility, cultural construction of socialist person, changes in courtship, marriage, and family, and political economy of reforms in post-Mao era. P/NP or letter grading.

167. Culture Area of Middle East. (4) (Formerly numbered 176.) Lecture, three hours. Study of Middle East has suggested many theories as to development of human kind, evolution of human society, birth of monotheism, and origin of agriculture, trade, and cities. Presentation of anthropological material relevant to understanding Middle East as culture area, and Islam as basis of its shared tradition. P/NP or letter grading.

168. Cultures of Pacific. (4) (Formerly numbered 177.) Lecture, three hours. Four major culture areas of Australia, Melanesia, Polynesia, and Micronesia. General geographical features, prehistory, and language distribution. A focus on adaptive sociocultural features of each culture area presented in context of their adaptive significance. P/NP or letter grading.

168Q. Ethnical Identity and Ethnic Relations in Hawai'i. (4) (Formerly numbered 177XP) Lecture, three hours; discussion, one hour. Continuing construction and expression of ethnic identity in various cultural forms and social contexts in Hawai'i. Overview of the theoretical approaches to and basic concepts in study of ethnic identity and ethnic relations. Discussion of historical and contemporary aspects of ethnic identity and ethnic relations in Hawai'i. Given in Hawai'i. P/NP or letter grading.

169. Selected Topics in Regional Cultures. (4) (Formerly numbered 179.) Lecture, three hours; discussion, one hour (when scheduled). Study of selected topics in regional cultures. Consult Schedule of Classes for topics and instructors. May be repeated for credit with topic change. P/NP or letter grading.

Specialized Studies

191. Variable Topics Research Seminars: Anthropology. (4) Seminar, three hours. Research seminar on selected topics in anthropology. Reading, discussion, and development of culminating project. Consult Schedule of Classes for topics and instructors. May be repeated for credit with topic change. P/NP or letter grading.

191HA. Beginning Seminar. (4) Seminar, three hours. Limited to anthropology honors program students. Survey of major research strategies in anthropology to aid honors students in developing research proposals. Letter grading.

191HB. Field Methods. (4) Seminar, three hours. Limited to anthropology honors program students. Survey of major field methods in anthropology to prepare students to conduct their own field research. Letter grading.

191HC. Data Analysis. (4) Seminar, three hours. Limited to anthropology honors program students. Study of major forms of data analysis in anthropology to aid honors students in analysis of their own research data. Letter grading.

191HD. Writing for Anthropology. (4) Seminar, three hours. Limited to anthropology honors program students. Teaching of writing skills, with focus on how to write honors theses. Letter grading.

191HE. Writing for Publication and Conference Presentations. (4) Seminar, three hours. Limited to anthropology honors program students. Preparation of honors theses for publication and for conference presentations and posters. Letter grading.

193. Journal Club Seminars: Anthropology. (1) Seminar, one hour. Limited to undergraduate students who are part of research group or internship. Discussion of research methods and current literature in discipline. Project required. May be repeated for credit with topic change. Letter grading.

194. Research Group Seminars: Anthropology. (1) Seminar, one hour. Limited to undergraduate students who are part of research groups or internship. Discussion of research methods and current literature in discipline. Project required. May be repeated for credit with topic change. Letter grading.

195CE. Community and Corporate Internships in Anthropology. (4) Tutorial, to be arranged; fieldwork, eight to 10 hours. Limited to juniors/seniors. Internship in corporate, governmental, or nonprofit setting coordinated through Center for Community Learning. Students complete a written project, attend biweekly meetings with graduate student coordinator, and write final research paper. Faculty sponsor and graduate student coordinator construct series of reading assignments that examine issues related to internship site. May be repeated for credit with consent of Center for Community Learning. No more than 4 units may be applied toward major; units applied must be taken for letter grade. Internship site must be approved in advance by supervising faculty member required. P/NP or letter grading.

197. Individual Studies in Anthropology. (2 to 8) Tutorial, to be arranged. Supervised individual research or research investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research in Anthropology. (2 to 8) Tutorial, to be arranged. Supervised individual research or research investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200. Conceptualizing Anthropological Research. (4) Seminar, three hours. Introduction to process of conceptualizing research projects, including formulating and theorizing research questions and developing appropriate methods of data collection. Preparation of proposals and presentation to group for critique. S/U or letter grading.

M201A-M201B. Graduate Core Seminars: Archaeology. (6) (Same as Anthropology M201A-M201B.) Seminar, three hours. Course M201A is required. Graduate students in anthropology for fieldwork, seminar discussions based on carefully selected list of 25 major works related to development of archaeological in social sciences (M201A) and humanities (M201B).
Anthropology

Core seminars provide students with foundation in breadth of knowledge required of professional archaeologists. Archaeological historiography, survey of world archaeology, and archaeological techniques. Emphasis on appreciation of multidisciplinary background of modern archaeology and relevant interpretative strategies. May be repeated for credit with consent of adviser. S/U or letter grading.


204. Core Seminar: Linguistic Anthropology. (4) Seminar, three hours. Theoretical and methodological foundation of study of language structure and language use from sociocultural perspective. Discussion of linguistic, philosophical, psychological, and anthropological contributions to understanding of verbal communication as social activity embedded in culture. S/U or letter grading.

Archaeology


CM210Q. Introduction to Archaeological Sciences. (4) Seminar, three hours. Basic understanding of newly introduced methods and techniques throughout field of archaeology to improve students’ appreciation and evaluation of results of their use by others who have embodied them in their scholarly publications or theoretical models. Systematic instruction in digital data management and mining, scientific analysis of materials (including geological and biochemical techniques), and visual presentation of data and research results (ranging from surface maps to virtual reality). Concurrently scheduled with course CM1100Q. S/U or letter grading.

211. Classification in Archaeology: Method and Theory. (4) Seminar, three hours. Limited to graduate anthropology and archaeology students. Discussion of issues that have guided arguments about how archaeological classification of artifacts should be conducted, with focus on ceramic classification and discovery of new methods. Emphasizes discovery approach to classification illustrated with lithic and pottery examples. Review of relationship between classification, style, and function. S/U or letter grading.

212P. Explanation of Societal Change. (Formerly numbered 217P) Seminar, three hours. Examination of processes of societal evolution, emphasizing usefulness of variety of explanatory models from general systems theory, ecology, anthropology, and other sources. Specific research questions vary with each course offering. May be repeated for credit. S/U or letter grading.

212Q. Archaeology of Urbanism. (4) (Formerly numbered 217QA) Seminar, three hours. Evaluation of cities as most complex form of human population center, using both archaeological and modern examples. Observations about material culture and space enable assessment of social dynamics as cities are constructed and lived in by variety of different ethnic, economic, social, and political groups. S/U or letter grading.

215S. Selected Laboratory Topics in Archaeology. (4) (Same as Archaeology M205A) Seminar, three hours. Design for students conducting experimental research in archaeology or in other departments. Specialized analysis of particular classes of cultural remains. Topic may be one of following: zoology, paleoethnobotany, ceramics, lithic analysis, rock art. Laboratory experience with collections and data. May be repeated for credit with topic change. S/U or letter grading.

216. Topics in Asian Archaeology. (4) (Same as Archaeology M205A) Seminar, three hours. Designed for graduate students. Topics may include identifications of ethnic groups in archaeology, archaeology of religion, archaeological reflections of commerce and trade and their influences on social development, and how languages dispersed, cultural contact and nature of cultural influence. S/U or letter grading.

219. Selected Topics in Anthropological/Archaeological Theory. (4) (Formerly numbered 285P) Seminar, three hours. Designed for graduate students. Variable topics course on important theoretical subjects in anthropological archaeology. Topics include early village societies, specialization and complexity, ethnography for archaeologists, power and hierarchy in intermediate societies, materialist/idealistic debates, urbanism, and exchange systems. May be repeated for credit. S/U or letter grading.

221. Behavior, Evolution, and Culture. (2) Seminar, one and one half hours. Research seminar. Weekly speakers present recent findings and theories in behavior, evolution, and culture. Focus on biological approaches to human and nonhuman behavior, psychology, and culture. S/U grade.

222. Graduate Core Seminar: Biological Anthropology in Review. (4) Seminar, three hours. Graduate core seminar in biological anthropology. Topics include evolutionary theory, behavior of nonhuman primates, hominid evolutionary history, and contemporary human variation. Letter grading.

223. Experimental Biological Anthropology. (2) Seminar, two hours. Research seminar for graduate students conducting experimental research in biological anthropology to assist students in developing research ideas and methods and analyzing results. S/U grading.

229. Current Problems in Biological Anthropology. (4) (Formerly numbered 220) Seminar, three hours. Detailed examination of current research in biological anthropology. Emphasis on nature of hypotheses and their testing in ongoing student and faculty research. May be repeated for credit. S/U or letter grading.

Sociocultural Anthropology


232P. Anthropology and Media Theory. (4) (Formerly numbered 233P) Seminar, three hours. Limited to graduate students. Examination of theoretical assumptions and debates that animate visual anthropology very broadly defined, including issues of interpretation, production, and reception of visual media, which includes ethnography, documentary, and feature films, as well as video and programming. S/U or letter grading.

232Q. Ethnographies of Information Technology. (4) (Formerly numbered 233T) Seminar, three hours. Emerging work in anthropology of technology with emphasis on ethnography. Reading of anthropological work and materials from range of disciplines, including sociology, geography, urban studies, and management studies. S/U or letter grading.

M233Q. Latin America: Traditional Medicine, Shamanism, and Folk Illness. (4) (Formerly numbered M264) (Same as Community Health Sciences M264 and Latin American Studies M264) Lecture, three hours. Recommended preparation: Community Health Sciences 132. Discussion of role of traditional medical and shamanism in Latin America and exploration of how indigenous and mestizo groups diagnose and treat illness and Western-defined diseases with variety of health-seeking methods. Examination of art, music, and ritual and case examples of religion and healing practices via lecture, film, and anthropological readings. S/U or letter grading.

M233R. Health and Culture in Americas. (4) (Formerly numbered M266) Lecture, three hours. Recommended requisite: one course from 203A, 203B, 203C, 204, or 252A. Discussion of how linguistic and psychological medical anthropologist inform each other in relation to narrative and times of trouble. Topics include narrative sense-making in response to illness, misfortune, phenomenon of pathos, death, narrative, healing, and experience; remembering through narrative; narrative subjectivity; and narrative and selves in motion. S/U or letter grading.

C234, Mind, Medicine, and Culture. (2) Seminar, two hours. Interdisciplinary discussion group hosting regular talks and discussions with scholars from UCLA and beyond. Group provides forum for exploring recent research and classical and contemporary theoretical perspectives that inform psychosocial studies and medical anthropology. Concurrently scheduled with course C134S. S/U grading.


236. Seminar: Psychocultural Studies and Medical Anthropology. (4) (Formerly numbered 234) Seminar, three hours. Devoted to present state of research in psychosocial studies. Survey of work in child development and socialization, personality, psychobiology, transcultural psychiatry, deviance, learning, perception, cognition, and psychosocial perspectives on change. S/U or letter grading.

M237. Psychological Anthropology. (4) (Formerly numbered M264) (Same as Psychiatry M272) Seminar, three hours. Recommended preparation: one course from 203A, 203B, 203C, 204, or 252A. Exploration of how linguistic and psychological medical anthropology inform each other in relation to narrative and times of trouble. Topics include narrative sense making in response to illness, misfortune, phenomenon of pathos, death, narrative, healing, and experience; remembering through narrative; narrative subjectivity; and narrative and selves in motion. S/U or letter grading.

M238. Selected Laboratory Topics in Archaeology. (4) (Formerly numbered M205A) Seminar, three hours. Recommended requisite: one course from 203A, 203B, 203C, 204, or 252A. Examination of current research in biological anthropology, both theoretical and methodological. Discussion of questions relating to symbolic and unconscious processes as they relate to culture. Topics vary from term to term. May be repeated for credit on topic change. S/U or letter grading.

239. Selected Topics in Field Ethnography. (4 to 8) [Formerly numbered 239P.] Seminar, three hours. Discussion and practical in various techniques for collecting and analyzing ethnographic field data. S/U or letter grading.


M243. Gender Studies. (4) [Formerly numbered M263P] (Same as Gender Studies M263.) Seminar, three hours. Current theoretical developments in understanding gender systems cross-culturally, with emphasis on relationship between systems of gender, economy, ideational systems, and social inequality. Selection of ethnographic cases from recent literature. S/U or letter grading.


C244S. Repatriation of Native American Human Remains and Cultural Objects. (4) (Formerly numbered C269P.) Lecture, two hours; discussion, one hour. Native Americans have recently been successful in obtaining passage of federal and state laws repatriating human remains and cultural objects to them. Examining contemporary issues and some of the themes scheduled with course C144S. S/U or letter grading.

246. Contemporary Problems in Africa. (4) (Formerly numbered 271.) Seminar, three hours. Problematic issues in Africa in light of classical anthropological literature and recent work by anthropologists and other fieldworkers in Africa, with cases from eastern and southern Africa. S/U or letter grading.

M247P. Japan in Age of Empire. (4) (Formerly numbered M276.) (Same as Asian M252 and History M268.) Seminar, three hours. Designed for graduate students. Since late 19th century, Japan expanded its empire into East and Southeast Asia. Coverage of that period and array of anthropological studies conducted in Japan and occupied areas in this hardly explored area of study of colonialism. S/U or letter grading.

M247Q. Central Asian Studies: Discipline, Methods, Debates. (2) (Formerly numbered M287T.) (Same as History M287T.) Seminar, two hours. Introduction to study of central Asia as practiced in humanities and social sciences disciplines. S/U grading.

249. Selected Topics in Social Anthropology. (4) (Formerly numbered 290.) Seminar, three hours. Intensive examination of current theoretical views and literature. S/U or letter grading.

252A. Ethnography of Communication. (4) (Formerly numbered 242P.) Seminar, three hours. Designed for graduate students. Seminars devoted to examining representative scholarship from fields of sociolinguistics and ethnography of communication. Particular attention to theoretical developments including relationship of ethnography of communication to such disciplines as anthropology, linguistics, and sociology. Topical focus include style and strategy, speech variation, varieties of noncasual speech genres, languages and ethnicity, and intonational communication behavior. S/U or letter grading.

252B. Ethnographic Methods in Language, Interaction, and Culture. (4) (Formerly numbered 249A.) Seminar, three hours. Required: course 252A or Sociology 244A. Ethnographic approaches to recording and analyzing communicative events and practices in their sociocultural context, involving student-initiated fieldwork in community setting. Emphasis on hands-on activities within theoretical frameworks that consider language as social and cultural practice. Devoted to skills related to collecting socially and culturally situated data for analysis. Particular methods depend on and are appropriate to research questions and designs students bring to class. S/U or letter grading.

253. Language Ideologies: Political Economy of Language Beliefs and Practices. (4) (Formerly numbered 243A.) Lecture, three hours. Language ideological research problematizes fundamental assumptions about speakers’ use of language and communicative practices: (1) speakers’ awareness of these structures and processes and (2) relationship of this consciousness to speakers’ political economic perspectives and to actual communicative conduct. S/U or letter grading.

C255. Native American Languages and Cultures. (4) (Formerly numbered C243P.) Lecture, three hours. Preparation: prior coursework in either anthropology, linguistics, or American Indian studies. Introduction and comparative analysis of sociocultural aspects of language use in Native North American Indian speech communities. Specific focus include both micro- and macro-sociolinguistic topics. Micro-sociolinguistic topics are comprised of such issues as multilingualism, cultural differences regarding appropriate communicative behavior within speech communities (e.g., male and female speech, baby talk, ceremonial speech, etc.). Macro-sociolinguistic considerations include language contact and its relationship to language in American Indian education. Concurrently scheduled with course C155. S/U or letter grading.

Linguistic Anthropology

257. Topics in Semantics and Pragmatics. (4) (Formerly numbered 247.) Seminar, four hours. Detailed examination of specialized topics in semantics and pragmatics. Topics vary from year to year and may include reference, pronoun reference, deixis, deixis, speech acts, honorific speech, evidentiality, reported speech, etc. May be repeated for credit with topic change. S/U or letter grading.

258. Language Socialization. (4) (Formerly numbered 248.) Seminar, four hours. Exploration of process of socialization through language and socializa- tion to use language across lifespan, across communities of practice within single society, and across different societies. Seminar topics include language in which verbal interaction between novices and experts is structured linguistically and culturally. S/U or letter grading.

259. Selected Topics in Linguistic Anthropology. (4) (Formerly numbered M241.) Seminar, three hours. Problems in relations of language, culture, and soci- ety. May be repeated for credit. S/U or letter grading.

M265Q. Advanced Seminar: Medical Anthropology. (2 to 4) (Same as Community Health Sciences M244, Nursing M273, and Psychiatry M273.) Seminar, three hours. Limited to 15 students. Examination of interrelationships between society, culture, ecology, health, and illness. Bases for written critical analysis and class discussion provided through key theoretical works. S/U or letter grading.

Research Methods

282. Research Design in Cultural Anthropology. Lecture, three hours. Primarily designed for graduate students preparing for fieldwork. Unique position of anthropologist among sciences and resulting problems for scientific research design. Review of typical re- search problems and appropriate methods. Students prepare their own research designs and present them for class discussion. S/U or letter grading.

M284A. Qualitative Research Methodology. (4) (Formerly numbered M264A.) (Same as Community Health Sciences M216L.) Seminar, three hours; labora- tory, one hour. Intensive seminar/field course in qual- itative research methodology. Includes an analysis of qualitative methods and techniques in research and evaluation related to healthcare. Letter grading.

284B. Quantitative Research Methodology. (4) (Formerly numbered 284P.) Seminar, three hours. Limited to graduate students. Recommended prepara- tion: research design course. Hands-on approach to qualitative methods used in anthropological research and preparation for analyst in anthropological research. Partic- ular methods depend on and are appropriate to re- search questions and designs students bring to class. S/U or letter grading.

288. Relational Models Theory and Research De- sign. (4) Seminar, three hours. Relational models theory (RMT) posits that people in all cultures use combinations of just four relational models (RMs) to organize most aspects of life: social coordination; communal sharing, authority ranking, equality matching, and market pricing. Exploration of how people use these RMs to motivate, generate, consti- tute, coordinate, judge, and sanction social interac- tion. RMT aims to account for what is universal and what varies across cultures, positing necessity for cul- tural complements that specify how and with whom each relational model operates. Readings may in- clude RMT research in social anthropology, archaeology, social theory, semiotics, linguistics, development, cognitive, social, political, moral, clinical, and cultural psychology, anthropology, sociology, family studies, philosophy, management, marketing, and consumer psychology, economics, justice, public health, public policy, and international development. S/U or letter grading.

Specialized Studies

294. Human Complex Systems Forum. (1) Seminar, 90 minutes every other week. Interdisciplinary seminar series to provide students with exposure to current research in understanding nature of human societies from complexity and multiagent perspective. May be repeated for credit. S/U grading.

295. The Culture and Language of Intersubjectivity. (4) Seminar, three hours. Requirements include: 15 week seminar, two courses 203A, 203B, or 203C, or 204. Introduction to notion of intersubjectivity and its relevance for an- thropological research. Exploration of problem of in- tersubjectivity in its existential, semiotic, and linguistic dimensions. Key topics include intentionality, con- scioussness, empathy, temporalility, agency, experi- ence, and embodiment. S/U or letter grading.

299. Selected Topics in Anthropology. (4) (Formerly numbered 297.) Seminar, three hours. Designed for graduate students. Study of selected topics of an- thropological interest. Consult Schedule of Classes for topics and instructors. May be repeated for credit. S/U or letter grading.

Special Studies

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice per- sonnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guid- ance and supervision of regular faculty member re- sponsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Teaching Anthropology. (2 to 4) Seminar/work- shop, three hours. Designed for graduate students. Required of new teaching assistants. Workshop/ seminar on teaching techniques, including evaluation of each student’s own performance as teaching assis- tant. Four-day workshop precedes beginning of term, followed by 10-week seminar during term designed to deal with problems and techniques of teaching an- thropology. Unit credit may be applied toward full- time equivalence but not toward nine-course require- ment for MA S/U grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: satisfactory completion of master’s degree, and consent of advisor and graduate dean, and host campus instructor, depart- ment chair, and graduate dean. Used to record enroll- ment of UCLA students in courses taken under coop- erative arrangements with USC. S/U grading.

The UCLA Academic Senate approved the disestablishment of the Department of Applied Linguistics; the discontinuance of the graduate degree and certificate programs, Language Teaching Minor, and African Languages BA; and the transfer of the Applied Linguistics BA to the Department of Linguistics effective winter quarter 2015. Students currently enrolled in any of the programs may complete them under current requirements.

Undergraduate Study

African Languages BA
The African Languages BA was discontinued effective winter quarter 2015.

Applied Linguistics BA
The Applied Linguistics BA was transferred to the Linguistics Department effective winter quarter 2015.

Graduate Study
The Department of Applied Linguistics offers Master of Arts (MA), Candidate in Philosophy (CPHil), and Doctor of Philosophy (PhD) degrees in Applied Linguistics. However, the UCLA Academic Senate approved the discontinuance of the graduate degree and certificate programs effective winter quarter 2015. Students currently enrolled in any of the programs may complete them under current requirements.

Applied Linguistics

Lower-Division Courses

30W. Language and Social Interaction. (5) Lecture, three hours; discussion, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 30. Exploration of range of topics related to study of language and social interaction in both mundane and professional settings, particularly how language affects social lives and how social organization affects use of language. Topics include different approaches to study of language in social interaction (theories and research methodologies), issues regarding language and social identity (such as socioeconomic status, race, gender, and situational identity), and issues concerning language and culture (such as cross-cultural misunderstanding and language socialization). Satisfies Writing II requirement. Letter grading.

596. Directed Individual Study. (2 to 12) Tutorial, to be arranged. Preparation: advanced study in one area of applied linguistics. May not be applied toward MA course requirements. Up to 8 units may be applied toward PhD course requirements. May be repeated for credit. S/U grading.

ARCHAEOLOGY

Interdepartmental Program
College of Letters and Science
A210 Fowler Building
Box 351150
Los Angeles, CA 90095-1510
310-825-4169
mrsanson@ioe.ucla.edu
http://www.archaeology.ucla.edu

John K. Papadopoulos, PhD, Chair

Faculty Committee
Stephen B. Acabado, PhD (Anthropology)
Jeanne E. Arnold, PhD (Anthropology)
Hans Barnard, MD, PhD (Near Eastern Languages and Cultures)
P. Jeffrey Brantingham, PhD (Anthropology)
Aaron A. Burke, PhD (Near Eastern Languages and Cultures)
Jesse L. Byock, PhD (Scandinavian Section)
Arthur F. Carter, PhD (Near Eastern Languages and Cultures)
Kathlyn (Kara) M. Cooney, PhD (Near Eastern Languages and Cultures)
Ioanna Kakoulli, DPhil (Materials Science and Engineering)
Richard G. Leslie, PhD (Anthropology)
Min Li, PhD (Anthropology, Asian Languages and Cultures)
Sarah P. Morris, PhD (Classics)
Stella E. Nair, PhD (Art History)
Johf K. Papadopoulos, PhD (Classics)
Ellen J. Pearlstein, MA (Information Studies)
Gregson T. Schachner, PhD (Anthropology)
David A. Scott, PhD (Art History)
Monica L. Smith, PhD (Anthropology)
Charles S. Stanish, PhD (Anthropology)
Lothar von Falkenhagen, PhD (Art History)
Thomas A. Wake, PhD (Anthropology)
Willette Z. Wendrich, PhD (Near Eastern Languages and Cultures)

Scope and Objectives
The interdisciplinary Archaeology Program offers MA and PhD degrees in Archaeology. It brings together interests and specialties represented by those departments offering courses in archaeology, as well as others offering courses relevant to archaeology. The primary purpose of the program is to train scholars in archaeology for university-level teaching and research and other professional aims. Its resources are intended for those archaeology students whose academic goals cannot be met within any single department and who, consequently, require an individually designed plan of study combining academic preparation in two or more departments. Applications are especially encouraged from students whose interests may form bridges with disciplines and departments not offering ar-
The Archaeology Program offers Master of Arts (M.A.), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Archaeology but does not encourage applicants who seek only an MA degree.

Archaeology

Lower-Division Courses

30. Science in Archaeology. (4) Lecture; three hours; discussion, one hour. Archaeology is rapidly developing due to ongoing introduction of new hardware, software, and information dissemination technology. It is a multidisciplinary field of study, combining its own unique research methods and technologies with elements from geology, history, ethnography, geography, material science, statistics, biology, biochemistry, medicine, and others, presenting opportunities not only to obtain new scholarly insights, but also to provide integrated instruction in science, technology, engineering, and mathematics (STEM) skills. Use of archaeological data as paradigm in STEM education. Instant practical application of mathematics during surveying, geology during ceramic analysis or geophysical research, biochemistry during archaeological residue analysis, or biology during zooarchaeological or palaeoethnobotanical research offers point of departure for instructors as well as motivation to students. P/NP or letter grading.

Upper-Division Courses

C110. Archaeological Materials Identification and Characterization. (4) Lecture, one hour; laboratory, two hours. Laboratory-oriented introduction for archaeologists to identification and quantitative description of solid materials, especially metals, ceramics, and other inorganic and some organic substances. Concurrently scheduled with course C210. P/NP or letter grading.

M112. Archaeology and Art of Christian and Islamic Egypt. (4) (Same as Art History M119D, Islamic Studies M112, and Middle Eastern Studies M112.) Lecture, three hours. Culture of Egypt transformed gradually after Muslim conquest in mid-7th century C.E. According to material evidence such as ceramics, textiles, architectural forms, and building techniques, it is functionally impossible to separate pre-Islamic Christian Egypt from early Islamic Egypt. Although population may have become largely Muslim by 10th century, Egypt remained Coptic in many senses even to 14th century and of considerable sizeable Christian minority to present. Survey of archaeological remains and standing architecture of Egypt from 8th to 19th century, charting changes and continuity in material culture and shifts in human geography and land use. P/NP or letter grading.

C120. Special Topics in Archaeology. (2 or 4) Lecture, three hours. Designed for juniors/seniors. Special topics on theoretical subjects in archaeology such as new or regional synthesis, or current work by core program faculty or special visiting scholars. May be repeated for credit with topic change. Concurrently scheduled with course C220. Final project or paper required if taken for 4 units (P/NP or letter grading); 2-unit course has P/NP grading.

C159. Fieldwork in Archaeology. (2 to 12) Fieldwork, to be arranged. Participation in archaeological field excavations or museum research under supervision of staff archaeologists at UCLA. Minimum one month of field time away from campus required. May be repeated for credit with consent of adviser. Concurrently scheduled with course C259. P/NP or letter grading.

C180. Ancient and Historic Metals: Corrosion, Technology, and Microstructure. (6) Seminar, four hours; laboratory, four hours. Overview of technology of ancient metals, aspects of extraction and alloying, corrosion that ancient metals undergo, and how this impacts their preservation. Exploration of knowledge and research work of last two decades that has substantially advanced understanding of processes of extraction, alloying, surface patination, metallic coatings, corrosion, and microstructure. Laboratory work in preparation and examination of metallic samples under microscope, as well as lectures on technology of metallic works of art. Discussion of phase and stability diagrams of common alloying systems and environments. Metallographic study samples represent Bronze Age Europe, Renaissance Europe, China from Warring States to Tang dynasty, Japanese swordmaking, Indian high-tin bronze alloys, bronzes, Peruvian, Colombian, Costa Rican, and Panamanian copper and gold-copper alloys. Concurrently scheduled with course C280. Letter grading.

Graduate Courses

M201A-M201B. Graduate Core Seminars: Archaeology. (4-4) (Same as Anthropology M201A-M201B.) Seminar, three hours. Required of all students. Seminar discussions based on carefully selected list of 25 major works related to development of methodology in social sciences (M201A) and humanities (M201B). Compulsory core seminars provide students with foundation in breadth of knowledge required of professional archaeologists. Archaeological historiography, survey of world archaeology, and archaeological techniques. Emphasis on appreciation of multidisciplinary background of modern archaeology and relevant interpretative strategies. May be repeated for credit with consent of adviser. S/U or letter grading.

M201C. Archaeological Research Design. (4) (Same as Ancient Near East M201.) Seminar, three hours. Requisites: courses M201A, M201B. How to design archaeological projects in preparation for MA thesis or PhD phase. Students do exploratory research to select subject, then write research design that could form basis for extensive paper, grant application, or oral examination. Students work closely with faculty members and report weekly on their progress. Preparation of at least two oral progress reports, one on theoretical framework and one on practical aspects of project. Final written research design that incorporates theoretical and practical aspects of research and formulates bridging arguments required. S/U or letter grading.

M205A. Selected Laboratory Topics in Archaeology. (4) (Same as Anthropology M212S.) Lecture, three hours. Designed for graduate students in archaeology or in other departments. Specialized analysis of particular classes of cultural remains. Topic may be one of following: zooarchaeology, paleoethnobotany, ceramics, lithic analysis, rock art, Laboratory experience with collections and data. May be repeated for credit with topic change. S/U or letter grading.

205B. Intensive Laboratory Training in Archaeology. (6) Formerly numbered M205B.) Lecture, three hours; laboratory, two hours minimum. Advanced laboratory training for graduate students with extended laboratory hours. Special laboratory-based topics, including but not limited to lithic analysis, ceramic analysis, zooarchaeology, and paleoethnobotany. May be repeated for credit with topic change. S/U or letter grading.

Architecture

Architecture and Urban Design

School of the Arts and Architecture

310-825-7857 admissions@aud.ucla.edu
http://www.aud.ucla.edu

Neil M. Denari, MArch, Interim Chair

Professors

Hitoshi Abe, PhD (Paul I. and Hisako Terasaki Professor of Contemporary Japanese Studies) Dana Cuff, PhD
Neil M. Denari, MArch
Diane G. Favro, PhD
Craig E. Hodgetts, MArch
Sylvia Lavin, PhD
S. Lynn, MArch
Mark Mack, MArch
Thom Mayne, MArch
Brett B. Steele, AADiP

Professors Emeriti

Marvin Adelson, PhD
Samuel Aroni, PhD
Baruch Givoni, PhD
Thomas S. Hines, PhD
Eugene Kupper, MArch
Jurg Lang, DiplArch
Robin S. Liggett, PhD
Murray A. Milne, MArch
Eaton Myers, MArch
George Rand, PhD
Dagmar E. Richter, DiplArch
Richard Schoen, MArch
Thomas R. Weeland, Jr., MArch
Richard S. Weinstein, MA

Associate Professors

Michael Osman, PhD
Jason K. Payne, MArch
Heather L. Roberge, MArch

Adjunct Professors

Alan Locke, MSc
Roger Sherman, MArch

Adjunct Associate Professor

Jeffrey N. Inaba, MArch, MA
Adjunct Assistant Professor
Georgina Hulijch, MArch

Scope and Objectives
The Department of Architecture and Urban Design at UCLA offers a Bachelor of Arts degree in Architectural Studies and four graduate degree programs tailored to the needs of different groups of students: MArch I, MArch II, MA, and PhD. The BA in Architectural Studies is a two-year program with focus on the built environment. The curriculum visualizes architecture as a cultural, creative, and technical practice and a discipline with direct social impact. Within the context of a liberal arts education, a finely balanced set of architecture and urban design courses, ranging from the history and theory of design to contemporary building technologies, provides students with a diverse foundation of knowledge in the field of architecture and prepares them for graduate school and/or careers in a wide range of fields.

MArch I is a three-year first professional degree program accredited by the National Architectural Accrediting Board (NAAB). It does not assume any prior background in architecture. Students who do have some prior architecture background (e.g., a four-year undergraduate degree) may also enter the program and may petition to waive certain required courses and substitute more advanced electives in their place. MArch I graduates normally pursue professional careers in architectural practice.

MArch II is an advanced self-supporting professional degree program for students who already hold a first professional degree in architecture. The program offers opportunities for intensive concentration in a variety of areas of professional specialization. The MA and PhD degree programs offer opportunities to pursue research and scholarship in the field of architecture. Graduates typically pursue academic or applied research and consulting careers.

In the U.S. most state registration boards require a degree from an accredited professional degree program as a requisite for licensure. NAAB, the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes two types of degrees: Bachelor of Architecture and Master of Architecture. A program may be granted a five-year, three-year, or two-year term of accreditation, depending on its degree of conformance with established standards. Master’s degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree which, when earned sequentially, comprise an accredited professional education. However, the pre-professional degree is not, by itself, recognized as an accredited degree.

Undergraduate Study
Architectural Studies BA

Admission
Students are admitted for fall quarter only. Admission is highly competitive, and only a limited number of students are admitted each year. UCLA students may apply for admission in fall quarter of their second year in residence, must have at least a 3.0 cumulative grade-point average, and are required to complete the Preparation for the Major courses, with grades of B or better, before applying for admission. Transfer students must have at least a 3.0 cumulative GPA and are expected to complete the Preparation for the Major courses during their first year in residence. All applicants must submit a statement of interest and a three- to six-page PDF of creative work. Applications are available in the department office to regularly enrolled UCLA students during the previous fall quarter. For further information, consult with the undergraduate adviser.

Preparation for the Major

The Major
Required: Architecture and Urban Design 121, 122, 123, 131, 132, 133, 141, 142, 143.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of Architecture and Urban Design offers Master of Architecture I (MArch I) and Master of Architecture II (MArch II) degrees, and Master of Arts (MA) and Doctor of Philosophy (PhD) degrees in Architecture. A concurrent degree program (Architecture MArch I/Urban Planning MURP) and a Graduate Certificate in Urban Humanities are also offered.

Graduate Program Requirements for UCLA Graduate Degrees

Architectural Studies

Architecture and Urban Design

Lower-Division Courses
1. Introduction to Design. (2 or 3) Studio/lecture/ field trips, 40 hours. Limited to high school students. Two- or three-week intensive summer course in architectural design, with focus on developing design skills through space making and its representation. Exposure to contemporary architectural practices through studio work, lectures and presentations, field trips, and final demonstration, critique, and exhibition of student work. Offered only as part of Teen Arch Studio summer program. P/NP grading.

10A. History of Architecture and Urban Design: Prehistory to Mannerism. (5) Lecture, three hours; discussion, one hour; outside study, 11 hours. Development of architecture and urban design from prehistory to 1600, constructing critical positions within which implications of terms historical, architectural, city, and culture can be explored. Focus on examples from Europe and Mediterranean Basin and periodic exploration of how those are manifested in or related to building and site. Development of material and temporal characteristics of architecture relative to role those play in landscape. Introduction to issues of accessibility and egress as systems of movement.

10B. History of Architecture and Urban Design: Baroque to Contemporary Moment. (5) Lecture, three hours; discussion, one hour; outside study, 11 hours. Survey of architectural and urban history from baroque to contemporary moment that covers significant buildings, spaces, artifacts, and theories of modernism. Architecture performs as reflection of cultural, sociopolitical, philosophical, and technological transformations in world history. Stylistic genres, applied terminology, seminal texts, and alternative historiographies that apply to design of built domain that range from detailed examination of Western tradition remains overall focus, weekly thematic categories provide variety of conduits for addressing architecture and urban design in global context. P/NP or letter grading.

30. Introduction to Architectural Studies. (5) Lecture, three hours; discussion, one hour; outside study, 11 hours. Exploration of role of built environment in social, cultural, and political life. Buildings are constructed, what they mean, effects they have on world, and ways they imagine new futures and shape private and public life. Focus on series of contemporary case studies for what each reveals about new possibilities for shaping world in which we live, with emphasis on how architecture extends to cities, roads, books, and films. Consideration of historical context and cultural genealogy of particular buildings and environments, material and economic conditions of building, and more. P/NP or letter grading.

Upper-Division Courses
102. Introduction to Representation. (2) Studio, four hours; outside study, 12 hours. Limited to currently enrolled college/university students and graduates of colleges/universities. Introduction to techniques of spatial representation as they relate to architectural design. How to communicate using two- and three-dimensional drawing and modeling. Analog and digital techniques and opportunity afforded by moving between both. Analog techniques include orthogonal and axonometric projection. Digital techniques focus on computer graphics fundamentals, including bit map and vector graphic imaging using Adobe suite and modeling using Rhinoceros. Offered in summer only. Letter grading.

103. Introduction to Architectural Design. (6) Studio, 18 hours. Limited to currently enrolled college/university students and graduates of colleges/universities. Introduction to basic architectural design principles and problem solving. How to control point, line, surface, and volume to shape spaces for human use. Visual analysis as tool for discussing and understanding organization. Techniques of repetition, variation, order, scale, and rhythm. Use of case-study analysis to uncover disciplinary issues within design problems and production of individual solutions to problems. Offered in summer only. Letter grading.

121. Studio I. (6) Studio and outside study, 10 hours. Limited to Architectural Studies majors. Introduction to basic architectural design principles and problem solving: how to control point, line, surface, and volume to shape spaces for human use. Visual analysis as tool for discussing and understanding organization. Techniques of repetition, variation, order, scale, and rhythm. Use of case-study analysis to uncover disciplinary issues within design problems, as well as to produce individual solutions to those problems. Letter grading.


123. Studio III. (6) Studio, eight hours; outside study, 10 hours. Enforced requisites: courses 121, 122. Limited to Architectural Studies majors. Introduction to discipline of spatial design, techniques, and organizations of landscapes, urbanism, and how those influence design of building and site. Development of material and temporal characteristics of architecture relative to role those play in landscape. Introduction to issues of accessibility and egress as systems of movement.

132. History of Architecture and Urban Design: Modernism. (6) Lecture, three hours; discussion, one hour; outside study, 11 hours. Survey of architectural and urban history in the modern period and its role in shaping modern architecture. Development of material and temporal characteristics of architecture relative to role those play in landscape. Introduction to issues of accessibility and egress as systems of movement.

134. History of Architecture and Urban Design: Modernism. (6) Lecture, three hours; discussion, one hour; outside study, 11 hours. Survey of architectural and urban history in the modern period and its role in shaping modern architecture. Development of material and temporal characteristics of architecture relative to role those play in landscape. Introduction to issues of accessibility and egress as systems of movement.

135. History of Architecture and Urban Design: Modernism. (6) Lecture, three hours; discussion, one hour; outside study, 11 hours. Survey of architectural and urban history in the modern period and its role in shaping modern architecture. Development of material and temporal characteristics of architecture relative to role those play in landscape. Introduction to issues of accessibility and egress as systems of movement.

136. History of Architecture and Urban Design: Modernism. (6) Lecture, three hours; discussion, one hour; outside study, 11 hours. Survey of architectural and urban history in the modern period and its role in shaping modern architecture. Development of material and temporal characteristics of architecture relative to role those play in landscape. Introduction to issues of accessibility and egress as systems of movement.

137. History of Architecture and Urban Design: Modernism. (6) Lecture, three hours; discussion, one hour; outside study, 11 hours. Survey of architectural and urban history in the modern period and its role in shaping modern architecture. Development of material and temporal characteristics of architecture relative to role those play in landscape. Introduction to issues of accessibility and egress as systems of movement.

138. History of Architecture and Urban Design: Modernism. (6) Lecture, three hours; discussion, one hour; outside study, 11 hours. Survey of architectural and urban history in the modern period and its role in shaping modern architecture. Development of material and temporal characteristics of architecture relative to role those play in landscape. Introduction to issues of accessibility and egress as systems of movement.

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142. History of Architecture and Urban Design: Modernism. (6) Lecture, three hours; discussion, one hour; outside study, 11 hours. Survey of architectural and urban history in the modern period and its role in shaping modern architecture. Development of material and temporal characteristics of architecture relative to role those play in landscape. Introduction to issues of accessibility and egress as systems of movement.
Structure as a serial component that relates to site, construction, topography, climatology, accessibility, and their mutual interaction. Letter grading.

M125B. Digital Cultural Mapping Core Course B: Google Earth, Geographic Information Systems, Hypertext, and Mapmaking. (4) Examines technologies (GIS, Web sites) used in producing and interpreting digital cultural maps of the ancient Near East (M125B/Laboratory, three hours, discussion, one hour. Enforced requisite: Ancient Near East 125A). Hands-on laboratory-based investigation of emerging digital mapping technologies, including instruction in Web-based mapping applications, virtual globes, and geographic information systems (GIS). Critique and creation of maps of cultural phenomena, applied in research projects examining events from the Ancient Near East 125A to real-world data sets in humanities and social sciences. By mastering emerging technologies in field of digital cultural mapping, students take part in evaluation and production of sophisticated visual representations of complex data, becoming active participants in development of this new field. How to use suite of GIS and geotechnology tools. Fostering of creative approaches to and engagement in mapping technologies: What new questions can be asked and answered using these technologies? How does one reason, argue, and solve real-world problems through digital cultural mapping? Design, development, and implementation of student mapping-based research projects. Part of Digital Cultural Mapping Project supported by W.M. Keck Foundation. P/NP or letter grading.

M125C. Digital Cultural Mapping Core Course C: Summer Research. (4) (Same as Ancient Near East 125C) Laboratory, three hours; fieldwork, one hour. Enforced requisite: course M125B or Ancient Near East 125A. Participation in collaborative geographic information systems (GIS) research project in humanities or social sciences using skills learned in courses 125A and M125B. Gathering and input of datasets from real-world sources, creating visual representations of data through production of digital maps, and performing analysis of larger dataset to answer specific research questions. Final oral presentation required that details student work and provides critical analysis of source material and technological/methodological issues inherent to type of GIS used for investigation. Part of Digital Cultural Mapping Project supported by W.M. Keck Foundation. Offered in summer only. P/NP or letter grading.

CM130. Space and Place. (4) (Formerly numbered M130.) (Same as World Arts and Cultures CM130.) Lecture, three hours. Survey of array of spaces and places that provide context for cross-cultural analysis and with performance emphasis, with focus on mutual interaction of human beings and their created environments. Emphasis on common, ordinary, anonymous spaces and places, which are used and built by members of small-scale, traditional, and transitional communities around world. Concurrently scheduled with course CM230. P/NP or letter grading.

131. Issues in Contemporary Design. (5) Lecture, three hours; outside study, 12 hours. Limited to Architectural Studies majors. How global design culture today operates as part of set of spatial, economic, political, and social discourses. From development of cities to new formal languages in architecture, consequences of fact that great percentage of our lives is spent in designed environments, including role that research and interdisciplinarity play today in influencing design ideas and processes, as well as how design is influenced by technology and new urbanism, architecture, and landscape design. Letter grading.

132. Domestic Architecture; Critical History. (5) Lecture, three hours; outside study, 12 hours. Limited to Architectural Studies majors. Investigation of relationship between culture and design through medium of domestic architecture, from communal living arrangements of antiquity to functional and automated ideals of modern movement. Exploration of how design of domestic interior has evolved to express and accommodate corresponding developments in lifestyle and taste. Letter grading.

133. Modernism and Metropolis. (5) Lecture, three hours; outside study, 12 hours. Limited to Architectural Studies majors. Introduction to emergence of contemporary metropolises through series of comparative urban explorations that begin in Los Angeles and extend to engage range of cities, including key examples from Asia to South America. Modern project can be seen in myriad forms across globe, so that city and suburb, taken together, exist in complex conumming of aesthetic, political, spatial, economic, technological, and social issues. Letter grading.

141. Technology I: Projections. (5) Laboratory, four hours; outside study, 11 hours. Limited to Architectural Studies majors. Introduction to techniques of spatial representation in the field of digital cultural design. How to communicate using two- and three-dimensional drawing and modeling. Analog and digital techniques and opportunity afforded by moving between both. Analog techniques include orthographic and axonometric projection. Digital techniques focus on computer graphics fundamentals, including bit map and vector graphic imaging using Adobe suite and modeling using Rhinoceros. Letter grading.

142. Technology II: Building Materials and Methods. (5) Laboratory, four hours; outside study, 11 hours. Limited to Architectural Studies majors. Introduction to construction systems and materials in relation to design, such as framed, bearing wall, or hybrid systems. Graphic conventions and organization of construction detailing. Letter grading.

143. Technology III: Digital Technology. (5) Laboratory, four hours; outside study, 11 hours. Limited to Architectural Studies majors. Overview of three-di-dimensional computer-aided visualization concepts, teaching applications of AutoCAD and Maya and their use relative to process of design and visual communication. Basic representation methods and tools and introduction to additional concepts required to dynamically interact with computer models. How to explore and understand communicative capacities of different methods of representation. Explanation of bitmap versus vector graphics, typography basics, and color output and integration for print and Web, and introduction to three-dimensional digital modeling and fabrication. Letter grading.


CM230. Space and Place. (4) (Same as World Arts and Cultures CM230.) Lecture, three hours. Survey of array of spaces and places that provide context for cross-cultural analysis and with performance emphasis, with focus on mutual interaction of human beings and their created environments. Emphasis on common, ordinary, anonymous spaces and places, which are used and built by members of small-scale, traditional, and transitional communities around world. Concurrently scheduled with course CM130. S/U or letter grading.

CM247A. Introduction to Sustainable Architecture and Community Planning. (4) (Same as Urban Planning M231.) Lecture, three hours. Relationship of built environment to natural environment through whole systems approach, with focus on management of buildings and planning of communities. Emphasis on energy efficiency, renewable energy, and appropriate use of resources, including materials, water, and land. Concurrently scheduled with course CM153. Letter grading.

M271. Elements of Urban Design. (4) (Same as Urban Planning M272.) Lecture, three hours. Introduction of basic knowledge of elements and methods of urban design. Multidisciplinary approach leading to understanding of political, socioeconomic, and technological framework of urban systems and its dynamic interrelations. S/U or letter grading.

M272. Real Estate Development and Finance. (4) (Same as Urban Planning M272.) Lecture, two hours; workshop, two hours; outside study, eight hours. Requisites: Urban Planning 220A, 220B. Introduction to real estate development process specifically geared to students in planning, architecture, and urban design. Financial decision model, market studies, designs, loan packages, development plan, and feasibility studies. Lectures and projects integrate development process with proposed design solutions that are interactively modified to meet economic feasibility tests. S/U or letter grading.

286. Roman Architecture and Urbanism. (4) Lecture, three hours. Examine architectural and urban developments during Roman period, from archaic age to late Empire. Built environments of ancient world investigated from various perspectives, with consideration to programming, symbolism, and viewing, as well as to technological, aesthetic, and political factors. S/U or letter grading.

288. Renaissance Architecture and Urbanism. (4) Lecture, three hours. Examination of architectural and urban developments from 15th to 17th century. Primary focus on Italian peninsula, and extending to entire Mediterranean basin. Analysis of individual structures, cities, and landscape design that reflect cultural and theoretical values, as well as specific aesthetic and iconographic content. S/U or letter grading.

299. Special Topics in Architecture and Urban Design. (2 to 4) Lecture, discussion, two to four hours. Selected academic topics initiated by students, student teams, or faculty and directed by faculty mentor. Culuminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

M201. Theories of Architecture. (4) (Same as Urban Planning M201.) Lecture, three hours; outside discussion, one hour; outside study, 11 hours. Design for graduate students. Examination of architectural developments from 15th to 17th century. Primary focus on Italian peninsula, and extending to entire Mediterranean basin. Analysis of individual structures, cities, and landscape design that reflect cultural and theoretical values, as well as specific aesthetic and iconographic content. S/U or letter grading.

226C. Computer Visualization. (4) Lecture, three hours. Designed for graduate students. Concept and techniques of computer visualization of artifacts, including realistic rendering and animation. Letter grading.


CM230. Space and Place. (4) (Same as World Arts and Cultures CM230.) Lecture, three hours. Survey of array of spaces and places that provide context for cross-cultural or comparative perspective and with performance emphasis, with focus on mutual interaction of human beings and their created environments. Emphasis on common, ordinary, anonymous, or vernacular nonbuilt and built environments, which are used and built by members of small-scale, traditional, and transitional communities around world. Concurrently scheduled with course CM130. S/U or letter grading.

CM247A. Introduction to Sustainable Architecture and Community Planning. (4) (Same as Urban Planning M231.) Lecture, three hours. Relationship of built environment to natural environment through whole systems approach, with focus on management of buildings and planning of communities. Emphasis on energy efficiency, renewable energy, and appropriate use of resources, including materials, water, and land. Concurrently scheduled with course CM153. Letter grading.

M271. Elements of Urban Design. (4) (Same as Urban Planning M272.) Lecture, three hours. Introduction of basic knowledge of elements and methods of urban design. Multidisciplinary approach leading to understanding of political, socioeconomic, and technological framework of urban systems and its dynamic interrelations. S/U or letter grading.

M272. Real Estate Development and Finance. (4) (Same as Urban Planning M272.) Lecture, two hours; workshop, two hours; outside study, eight hours. Requisites: Urban Planning 220A, 220B. Introduction to real estate development process specifically geared to students in planning, architecture, and urban design. Financial decision model, market studies, designs, loan packages, development plan, and feasibility studies. Lectures and projects integrate development process with proposed design solutions that are interactively modified to meet economic feasibility tests. S/U or letter grading.

286. Roman Architecture and Urbanism. (4) Lecture, three hours. Examination of architectural and urban developments during Roman period, from archaic age to late Empire. Built environments of ancient world investigated from various perspectives, with consideration to programming, symbolism, and viewing, as well as to technological, aesthetic, and political factors. S/U or letter grading.

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299. Special Topics in Architecture and Urban Design. (2 to 4) Lecture, discussion, two to four hours. Selected academic topics initiated by students, student teams, or faculty and directed by faculty member. May be repeated for credit. S/U or letter grading.

299. Special Topics in Critical Studies in Architectural Culture. (3) Lecture, discussion, one hour; outside study, 11 hours. Designed for graduate students. Exploration of how architecture operates in relation to wider cultural, historical, and theoretical issues. May be repeated for maximum of 30 units. Letter grading.
291. Theory of Architectural Programming. (4) Lecture, three hours. Exploration of concepts and methods of architectural programming and its interaction to design process; planning of design process; various techniques for determination of program contents, basic conditions, resources, and constraints; identification of solution types for given situations. S/U or letter grading.

M295. Politics, Ideology, and Design. (Same as Urban Planning M295.) Lecture, three hours. Exploration of cultural and political context of architecture and planning work. Examination of theory and practice from various perspectives applied to set of varied physical effects and set to consider spatialized concepts. Consideration of theoretical propositions that are shaping present urban and architectural debate and concrete case studies where politics and ideology shape design process. Letter grading.

294A-294B. Environmental Psychology. (4-4) Lecture, three hours. Introduction to models, concepts, and theories concerning impact of environment on human behavior, perception, and thought. Review of research results concerning space perception, cognitive mapping, preferences and attitudes toward environment, effects of crowding and stress, personal space and personal environment, and letter grading.

295. Introduction to Urban Humanities. (Same as Urban Planning M295.) Seminar, six hours; studio, six hours. Core introduction to urban humanities. Analytical and descriptive methods of humanities paired with spatial and projective methods of architectural and urban design to better understand contemporaneous state of human environment. Focus on Los Angeles, with concepts seminar, methods laboratory; projects studio, and site visit components. Offered in summer only. S/U or letter grading.

296. Proseminar: Critical Studies in Architectural Culture. (4) Seminar, three hours. Orientation for PhD students to architectural theory, scholarship, and research and to current research directions and questions, through intensive reading and critical discussion. Letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for instruction. Consent of instructor at UCLA. May be repeated for credit. S/U grading.

401. Advanced Topics Studio. (6) Studio, 12 hours; outside study, six hours. Preparation: satisfactory completion of intermediate-level studios (courses 412, 413, 414, 415) or MArch II student. Students may choose (through lottery) from several different project topics focusing on special topics in architectural and urban design to be offered by faculty members. May be repeated for credit. Letter grading.

402. Final Advanced Topics Studio. (6) Studio, 12 hours; outside study, six hours. Preparation: satisfactory completion of intermediate- and advanced-level studios for MArch I students; satisfactory completion of advanced-level studios and fourth-term standing for MArch II students. Students may choose (through lottery) from several different advanced studio project topics focusing on special topics in architectural and urban design to be offered by faculty members. Exempt document (analytic paper with graphic component that critically examines final student design work) required at course completion. Letter grading. For courses 403A, 403B, 403C Research Studios, (2-2-6) For courses 403A, 403B, seminar: three hours; outside study: 403C: studio, 12 hours; outside study: six hours. Preparation: satisfactory completion of intermediate-level studios (courses 412, 413, 414, 415) or MArch II student. Course 403A is requisite to 403B, which is requisite to 403C. In-depth research phase (courses 403A, 403B) and advanced studio project (course 403C), with focus on number of different special topics in architecture and urban design. In Progress (403A, 403B) and letter (403C) grading.

404A. Joint Planning/Architecture Studio. (4) (Same as Urban Planning M404A.) Lecture, one hour; discussion, one hour; studio, four hours. Opportunity to work on joint planning/architecture project for client. Outside speakers; field trips. Examples of past projects addressing issues of planning and design in urban and rural settings. S/U or letter grading.

404B. Joint Planning/Architecture Studio. (4) (Same as Urban Planning M404B.) Lecture, one hour; discussion, one hour; studio, four hours. Opportunity to work on joint planning/architecture project for client. Outside speakers; field trips. Examples of past projects addressing issues of planning and design in urban and rural settings. S/U or letter grading.

410. Introductory Design Studio. (6) Studio, 12 hours; outside study, six hours. Introductions to sketching, drawing, perspectives, CAD. Architectural composition and introduction of structural elements. After each is studied by means of manipulative exercise that allows for experimentation of its intrinsic possibilities, students undertake series of closely related projects, with concern for structural elements and then design small buildings. Letter grading.

412. Building Design Studio. (6) Studio, 12 hours; outside study, six hours. Require: course 411. Concentration on basic skills, leading to projects exploring architectural program in relation to design process and, particularly, implications of program on architectural forms and concepts. In second phase, introduction of structural system; fulfillment of structural requirements and to support and further develop integrated forms and concepts. Letter grading.

413. Building Design with Landscape Studio. (6) Studio, 12 hours; outside study, six hours. Require: course 412. Instruction on strategies and technical issues such as site planning, urban design, landscape design, building typology. Building design and site planning in relation to water, landform, and plants in natural light, heat, and ventilation. Letter grading.

414. Major Building Design Studio. (6) Studio, 12 hours; outside study, six hours. Require: course 413. Designed for second-year graduate students. Introduction to site planning, structural system and program manipulation, site planning, urban design, and integration of architectural systems and structural expression. Emphasis either on treatment in breadth of large-scale projects or exploration in depth and detail of smaller-scale projects. Students learn to integrate structure and environmental control and to present their ideas in graphic or model form. Letter grading.

415. Comprehensive Studio. (6) Studio, 12 hours; outside study, six hours. Require: course 414. Curation of core sequence (courses 411 through 414), with focus on development phase of project. Technical concerns such as lighting, material innovation, sustainability, construction and building envelopes to be considered critical to consideration of architectural form, integrated in design of single building project. Letter grading.


436. Introduction to Building Construction. (2) Lecture, two hours; outside study, four hours. Introduction to construction techniques. Study of physical principles and materials for making architecture through series of exercises and field trips. Letter grading.

437. Building Construction. (4) Laboratory, four hours; outside study, eight hours. Principles of structure and enclosure, with focus on production and materials research. Exploration of building elements for formal and functional properties; in addition, design development of project in previous studio may be developed in detail with integration of range of technical systems. Letter grading.

441. Environmental Control Systems. (4) Lecture, four hours. Design of mechanical systems necessary for functioning of large buildings: air handling, fire and life safety, plumbing, vertical and horizontal circulation, communication and electrical power distribution, analysis of interaction of these systems and their integrated effects on architectural form of building. S/U or letter grading.

442. Building Climatology. (4) Lecture, four hours. Preparation: basic physics. Design of buildings that specifically respond to local climate; utilization of natural energies, human thermal comfort; sun motion and sun control devices; use of plant materials and landforms to modify microclimate. S/U or letter grading.


496. Special Projects in Architecture. (2 to 8) Tutorial, to be arranged. Projects initiated either by individual students or student teams and directed by faculty member. May be repeated for credit. S/U or letter grading.

497. Special Projects in Urban Design. (2 to 8) Tutorial, to be arranged. Projects initiated either by individual students or student teams and directed by faculty member. May be repeated for credit. S/U or letter grading.

498. Comprehensive Examination Seminar. (4) Seminar, three hours; outside study, nine hours. Seminar intended to begin process of developing independent proposal with related research and documentation that moves toward a final document or book for each project. S/U grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate advisor and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.


597. Preparation for Comprehensive Examination or PhD Qualifying Examinations. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U grading.


Hirsch Perlman, BA, Chair

Professors
Jennifer Bolande, BFA
Barbara Duicker, MFA
Russell Ferguson, MA
Andrea Fraser
Barbara Kruger
Catherine S. Opie, MFA
Hirsch Perlman, BA
Lari G. Pittman, MFA
Adrian A. Saxe, BFA
Patty A. Wickman, MFA

Professors Emeriti
Raymond B. Brown, MA
Roger R. Herman, MFA
Mary Kelly, MA
Paul D. McCarthy, MFA
Charles R. Ray, MFA
Nancy J. Rubins, MFA
James Welling, MFA

Associate Professors
Rodney T. McMillan, MFA
Silke Otto-Knapp, MFA

Lecturer
Jacob M. Samuel, BFA

Scope and Objectives
The Department of Art offers professional art training that emphasizes experimentation and encourages students to draw from many disciplines in their creative process. The curriculum offers a strong background in theory and criticism to support contemporary studio practice. Bachelor of Arts degree coursework and Master of Fine Arts degree specializations include ceramics, new genres, painting and drawing, and sculpture. An interdisciplinary studio option is offered within the MFA program. All programs have access to the art resources at UCLA and in the Los Angeles community.

The Department of Art reserves the right to hold for exhibition purposes examples of any work done in classes and to retain for the permanent collection such examples as may be selected.

Additionally, the Department of Art reserves the right to use documentation and reproductions of student art work from studio courses, student exhibitions, and other records of creative work in publications including, but not limited to, the undergraduate and graduate brochures and publications, department and school websites, and presentations and events related to student recruitment and outreach.

Undergraduate Study
The Art major is a designated capstone major. As part of the upper-division advanced studio requirements, all undergraduate students are required to complete a senior studio course that emphasizes analysis and criticism of individual creative work and ideas. Students develop and present a body of creative work in which they exhibit familiarity with and competence in a range of techniques and media, and a level of proficiency in utilizing particular media appropriate to advanced-level studio projects. Graduates are expected to demonstrate familiarity with historical precedents for and issues in contemporary art, to understand terms and concepts relevant to contemporary art discourse, and to have the ability to effectively articulate analysis of works of art to participate in a studio critique.

Art BA

Capstone Major

Preparation for the Major


The Major

Required: A minimum of nine upper-division courses, including Art 100 or 132 or one course from an approved list of upper-division nonmajor courses, six courses from at least four of the following studio areas: 130, 133, 137, 140, 145, 147, 148, one course from Art History M110A through 185, one capstone senior studio course (Art 150), and 8 units of art electives.

Each course applied toward major requirements must be taken for a letter grade, with the exception of courses 190, 193, and 195, which are offered only on a Passed/Not Passed grading basis. Of those, no more than 4 units total may be applied toward the upper-division art elective requirement.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Art offers the Master of Fine Arts (MFA) degree in Art.

Art

Lower-Division Courses

1A. Drawing. (5) Studio, eight hours; five hours arranged. Course in basic drawing skills intended as preparation for work in variety of media. P/NP or letter grading.

1B. Sculpture. (5) Studio, eight hours; five hours arranged. Introduction to concepts and forms of contemporary sculpture to become familiar with tools and material to enable students to visually manifest their individual ideas. Presentation of work of contemporary artists. P/NP or letter grading.

11A. Painting. (5) Studio, eight hours; five hours arranged. Basics of painting: introduction to technical procedures, tools, and materials. Discussion of fundamental conceptual and formal concerns. P/NP or letter grading.

11B. Photography. (5) Studio, eight hours; five hours arranged. Fundamentals in technique, with emphasis on individual projects. Varied approaches, processes, and applications of photographic medium within context of text of art, supported by studies in theory, aesthetics, and history of photography. P/NP or letter grading.

11C. Printmaking. (5) Studio, eight hours; five hours arranged. Introductory survey of various technical and conceptual concerns in variety of printmaking media as preparation for more focused study in particular media at upper-division level. P/NP or letter grading.

11D. New Genres. (5) Studio, eight hours; five hours arranged. Introduction to projects in installation, performance, video, film, intermedia, and other nontraditional media and processes. P/NP or letter grading.

11E. Ceramics. (5) Studio, eight hours; five hours arranged. Introduction to ceramic materials and processes, with emphasis on personal and cultural expression in ceramic media. Discussion of ceramics in contemporary artistic practice and social history of ceramic art. Letter grading.


21A. Production: Photographic Print. (5) Studio, four hours. Limited to Art majors. Not open for credit to students with credit for course 20. Techniques and processes, including basics of shooting, editing, and output for still images and photographs. Professional setups and standard practices as well as alternatives. Review of use of tools, software, workflow, storage, and output modalities. Instruction in postproduction skills and tools for editing and altering images and producing high-quality printed images. Letter grading.

21B. Production: Moving Image and Sound. (5) Studio, four hours. Limited to Art majors. Not open for credit to students with credit for course 20. Moving image and sound production and post-production techniques, tools, and processes, including instruction in basics of shooting, editing, output, and display. Familiarization with production skills, equipment, setups, and standard practices used in creation of moving image and/or sound works. Instruction in use of cameras, lights, and microphones, and recording setups and techniques, including handheld, fig-fig, dolly-shots, and green screens. Introduction to and development of familiarity with post-production software and processes of editing, animating, exporting, and presenting quality sound and moving image works. Letter grading.

31A. Modernism. (5) Lecture, three hours; discussion, one hour; field trips, three hours. Impact of modernist thought on art and society from mid-19th through early-20th centuries. Exploration of origins, development, theory, and practice of modernism in Europe and U.S. Letter grading.

31B. Modernism. (5) Lecture, three hours; discussion, one hour; field trips, three hours. Art majors should complete courses 31A, 31B, and 31C in sequence in first year. Continuation of impact of modernist ideas through mid-20th century, with focus primarily on work made from 1920s to 1960s. Letter grading.

31C. Modernism. (5) Lecture, three hours; discussion, one hour; field trips, three hours. Art majors should complete courses 31A, 31B, and 31C in sequence in first year. Continuation of impact of modernist ideas through latter part of 20th century, covering shift from modernist to postmodernist practices and theories, with focus on work made from 1960s to present. Letter grading.

70. Summer Art Institute: Special Topics in Studio. (5) Studio/lecture/field trips, 45 hours. Limited to high school students in Summer Art Institute. Two-week intensive in studio art covering range of media and contemporary art practices and combination of focused studio work, lecture/presentations, field trips, etc.
The document describes various courses offered in the field of Art, categorized under Upper-Division Courses and Graduate Courses. Each course's title, level, units, prerequisites, and descriptions are provided. The courses cover a wide range of topics including art history, theory, studio practice, and research. Some courses are repeated for a maximum of 16, 20, or even 8 units, depending on the course and the credit policy. The courses are designed to enhance students' skills in critical thinking, research, and creative expression. The document mentions the courses' focus on issues in contemporary art, art criticism, and hands-on studio practice. Overall, the courses aim to develop students' understanding of art as a multifaceted field, integrating theory, practice, and historical context.
woodcut, silk screen, photo printmaking, and mixed media. May be repeated for credit with consent of adviser. Letter grading.

273. Graduate Sculpture. (2 to 8) Studio, eight hours. Studies in sculpture with specific attention to ongoing nature, specificity, and approach to each student's particular concerns or ongoing studio projects. Individual studio visits and consultation. May be repeated for credit with consent of adviser. Letter grading.

274. Graduate Photography. (2 to 8) Studio, eight hours. Studies concentrating on development of individual students' artwork. Studio emphasis with adequate studies in theoretical and critical analysis. Specific attention to original, expressive, social, and humanistic values of art. May be repeated for credit with consent of adviser. Letter grading.

275. Graduate New Genres. (2 to 8) Studio, eight hours. Studies in alternative media, including installation, performance, video, film, and other nontraditional media and processes. May be repeated for credit with consent of adviser. Letter grading.

276. Graduate Group Critique. (4) Discussion, four hours; tutorial, to be arranged. Group critique/discussion of students' research. Additional tutorial meetings by arrangement with instructor. May be repeated for credit. Letter grading.

277. Graduate Ceramics. (2 to 8) Studio, eight hours. Studies in ceramics and art with investigation of traditional approaches and intellectual approaches to art practice utilizing ceramic media. Emphasis on development of significant body of original work reflecting student's expressive and theoretical concerns. May be repeated for credit. Letter grading.

278. Interdisciplinary Studio. (2 to 8) Studio, eight hours. Tutorial focused on directed research, studio visits, and group discussions of recommended readings. May be repeated for credit. S/U or letter grading.

C280. Seminar: Art. (4) Seminar, three hours. Advanced topics in critical theory and study of contemporary art, with emphasis on individuals, issues, and methodologies. Possible areas of study from structuralism, deconstruction, feminist and psychoanalytic theory, commodification, and censorship. May be repeated for credit. Concurrently scheduled with course C180. Letter grading.

C281. Exhibition and System. (4) Seminar, four hours. Examination of temporary exhibition and its associated field of publications as intertextual system of meaning, beginning with individual works and proceeding to on-site analysis of current exhibits. May be repeated for credit. Concurrently scheduled with course C181. Letter grading.

C282. Exhibitions and Public Programs. (4) Seminar, four hours. Introduction to principles of program planning and community development in relation to visual arts and work of art museums. May be repeated for credit. Concurrently scheduled with course C182. Letter grading.

C283. Special Topics in Art. (2 or 4) Seminar, six hours (2-unit course) or 12 hours (4-unit course). Selected topics in art explored through variety of approaches that may include projects, readings, discussion, research papers, and oral presentations. Topics announced in advance. May be repeated for credit. Concurrently scheduled with course C183. Letter grading.

C287. Contemporary Art Collections in Los Angeles. (2) Seminar, three hours; outside study, three hours. Exploration of critical issues regarding concept of collections and collecting. Visits to institutions and collections and discussion of vision, goals, and scope of collections, as well as individual works. Concurrently scheduled with course C187. Letter grading.

375. Teaching Apprentice Practicum (1 to 4). Seminar, to be arranged. Preparation: apprenticeship/personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

400A-400B. Visiting Artists Studio. (2-2) Studio, six hours. Designed for MFA students. Introduction to visiting artists in their area of study, with focus on one-on-one critiques with wide range of practitioners. In Progress (400A) and S/U (400B) grading.

400C. Visiting Artists Studio. (4) Studio, 12 hours. Limited to graduate art students. Introduction to visiting artists in their area of study, with focus on one-on-one critiques with wide range of practitioners. S/U grading.

401. MFA Working Groups. (2) Research group meeting, two hours. Limited to MFA students. Three or more MFA candidates propose research and/or studio topic and invite Art Department faculty member to mentor group/topic. May be repeated for credit. S/U grading.

495. Teaching Assistant Training Practicum. (2) Seminar, three hours; outside study, three hours. Forum for first-year teaching assistants for discussion and exploration of teaching pedagogy and classroom mechanics. Problems and practices of teaching art at college level, as well as role of teaching assistants within department. Designed to help new teaching assistants develop teaching skills and to orient them to department and University policies and resources. May not be applied toward degree requirements. S/U grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate adviser and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. May be repeated for credit with consent of adviser. S/U or letter grading.

597. Preparation for Master's Comprehensive Exam. (2 to 12) Tutorial, to be arranged. May be repeated toward MA or MFA course requirements. May be repeated. S/U grading.

Scope and Objectives
The Department of Art History offers programs leading to the Bachelor of Arts, Master of Arts, and PhD degrees. It endorses an interdisciplinary and intercultural approach to art history of all periods and places. By thinking across current categories and boundaries and even critically interrogating art history itself, students are encouraged to question the canon, rethink the relationship between margins and centers, and practice a socially and politically responsible art history.

The rich and varied art resources available at UCLA and throughout Southern California offer students extraordinary opportunities to supplement the formal curriculum.

Undergraduate Study
The Art History Department offers a designated capstone program for undergraduate majors. Students have options for completing a senior honors thesis, a directed independent study, an advanced undergraduate seminar, a museum studies internship, a research assistantship, or a faculty-approved upper-division course that includes additional coursework culminating in the completion of a capstone paper. Through their capstone work, students are expected to conceive and execute a research or creative project; identify and evaluate documentation relevant to the discipline; develop an enhanced capacity for writing and research, critical and analytical thinking, and competent familiarity with art historical methodologies; and identify and articulate these arguments within art historical discourse and areas of specialization. The capstone experience also enables students to develop an enriched understanding of the foundations of the discipline, as well as the current landscape of the field.

Art History BA
Capstone Program
Preparation for the Major
Required: Two courses from Art History 20 through 24 and two courses from 27 through 31. It is strongly recommended that the courses be taken prior to enrollment in upper-division courses. Some of these courses serve as requisites to certain upper-division courses.

Transfer Students
Transfer applicants to the Art History major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two art history courses in ancient, Renaissance and baroque, medieval, or modern art and two courses in African, Asian, or pre-Columbian art.
The Honors Program

The honors program is designed for Art History majors who are interested in carrying out an independent research project that culminates in a departmental honors thesis of approximately 30 pages. The program gives qualified students the opportunity to work closely with individual professors on an in-depth supervised research and writing project.

All senior Art History majors who have completed a minimum of six upper-division art history courses with a departmental grade-point average of 3.5 or better and an overall GPA of 3.0 or better are eligible to apply. Consult the art history student affairs officer no later than the beginning of fall quarter of the senior year.

To qualify for graduation with honors, students must (1) complete all requirements for the major, (2) have a cumulative grade-point average of 3.5 or better in upper-division courses in the department and an overall GPA of 3.0 or better, and (3) complete Art History 198A and 198B with grades of A- or better.

To qualify for graduation with highest honors, students must (1) complete all requirements for the major, (2) have a cumulative GPA of 3.85 or better in upper-division courses in the department and an overall GPA of 3.65 or better, and (3) complete courses 198A and 198B with grades of A.

Art History Minor

The Art History minor is designed for students who wish to augment their major with a series of courses that analyze the history, theory, and criticism of diverse visual traditions in world culture. On the lower-division level, the minor exposes students to overviews of these traditions in broad time periods from ancient to modern, from the regional to the global, as well as to courses that trace the historical significance of art in the context of specific thematic and media concerns. Upper-division courses offer more specialized content that explores crucial episodes or areas with more intense and rigorous theoretical and methodological strategies.

To enter the minor students must be in good standing, have completed courses numbered 100 through 185; course 119A, 119B may also be included. With prior approval of the undergraduate adviser, one of these courses may be taken in another department.

While the department does not require language training beyond the College requirement, Art History majors, particularly those planning graduate work, are strongly encouraged to study foreign languages beyond what is required by the College.

Each course must be taken for a letter grade.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Art History offers Master of Arts (MA) and Doctor of Philosophy (PhD) degrees in Art History.

Art History

Lower-Division Courses

20. Ancient Art. (Formerly numbered 50.) Lecture, three hours; quiz, one hour. Prehistoric, Egyptian, Mesopotamian, Aegean, Greek, Hellenistic, and Roman art and architecture. P/NP or letter grading.

21. Medieval Art. (Formerly numbered 51.) Lecture, three hours; quiz, one hour. Early Christian, Byzantine, Islamic, Carolingian, Ottoman, Romanesque, and Gothic art and architecture. P/NP or letter grading.
23. Modern Art. (Formerly numbered 54.) Lecture, three hours; discussion, one hour; museum field trips. History of modern art from 1860s to 1960s, from Manet and impressionists to pop art and minimalism. Study of origins and social functions, as well as aesthetic innovations and philosophical dilemmas of modernism. P/NP or letter grading.

24. Architecture in Modern World. (Formerly numbered 58.) Lecture, three hours; discussion, one hour. Introduction to study of architectural history through examination of built world of past centuries. Building technologies and forms of economic, social, and political life have produced modern built environment that is both diverse and increasingly connected. Focus on factors that have affected architecture globally and those that give regions, cultures, and historical periods their particular qualities. Topics include urban realms of self-consciousness, nationalism and internationalism, industrialism, colonialism and anticolonialism, and new art and architectural theories. P/NP or letter grading.

27. Art and Architecture of Ancient Americas. (Formerly numbered 55B.) Lecture, three hours; discussion, one hour; museum field trips. Introduction to art, architecture, and urbanism of Americas (North to South) from earliest settlement until A.D. 1500. Analysis of variety of media within their historical and cultural context. P/NP or letter grading.

28. Arts of Africa. (Formerly numbered 55A.) Lecture, three hours; discussion, one hour; museum field trips. History of art and architecture of Africa. Examination of social and historical contexts of their production. Introduction to body of information within framework of conceptual problem through series of case studies. P/NP or letter grading.

29. Chinese Art. (Formerly numbered 56B.) Lecture, three hours; discussion, one hour; museum field trips. Discussion of selection of monuments and objects from Indian subcontinent and Southeast Asia using key historical, cultural, and religious concepts. Analysis of each monument or object in detail, with their relationships compared and contrasted. P/NP or letter grading.

88. Lower-Division Seminars. (4) Seminar, three hours. Limited to freshmen. Variable topics; consult Schedule of Classes or department for topics to be offered in specific term. P/NP or letter grading.

Upper-Division Courses

100. Art Historical Theories and Methodologies. (4) Seminar, three hours. Requisites: three courses from 20 through 31. Critical examination of history of discipline of art history, with studies of various theoretical, critical, andmethodological approaches to visual arts. P/NP or letter grading.

M110A. Art and Architecture of Ancient Egypt, Predynastic Period to New Kingdom. (4) (Formerly numbered M101A.) Lecture, three hours. Study of architecture, sculpture, painting, and minor arts from Predynastic period and Old Kingdom. May be repeated for credit with consent of instructor. P/NP or letter grading.

M110B. Art and Architecture of Ancient Egypt, New Kingdom to Greco-Roman Period. (4) (Formerly numbered M101B.) Lecture, three hours. Study of architecture, sculpture, painting, and minor arts from New Kingdom to Greco-Roman period. P/NP or letter grading.

M110C. Ancient Egyptian Temple and City of Thebes. (4) (Formerly numbered M101C.) Lecture, four hours; fieldwork, one hour. Focus on ancient temples of city of Thebes (modern Luxor). Theban temples are some of best-preserved cult buildings in all of Egypt, and their study illuminates traditions of artistic representation, architectural development, and social and political transformations echoed throughout all of ancient Egypt. Investigation of ritual linking of temples on Nile's eastern and western banks through festival procession and events. Emphasis in function and form of Theban temples through time, and statutory program of individual temples. P/NP or letter grading.

M111. Minoan Art and Archaeology. (4) (Formerly numbered M102A.) (Same as Classics M153A.) Lecture, three hours. Requisite: course 20 or Classics 10 or letter grading. Study of development of art and architecture in Minoan Crete from circa 3000 to 1000 B.C. P/NP or letter grading.

M112A. Mycenaean Art and Archaeology. (4) (Formerly numbered M102B.) (Same as Classics M153B.) Lecture, three hours. Requisite: course 20 or Classics 10 or 51A. Study of development of art and architecture in Mycenaean Greece from circa 2000 to 1000 B.C. P/NP or letter grading.

M112B. Archaic Greek Art and Archaeology. (4) (Formerly numbered M102C.) (Same as Classics M153C.) Lecture, three hours. Requisite: course 20 or Classics 10 or letter grading. Concurrently scheduled with course M112I. P/NP or letter grading.

M112C. Classical Greek Art and Archaeology. (4) (Formerly numbered M102D.) (Same as Classics M153D.) Lecture, three hours. Requisite: course 20 or Classics 10 or 51A. Study of development of art and architecture of Greek world from approximately 800 through 490 B.C. P/NP or letter grading.

M112D. Hellenistic Greek Art and Archaeology. (4) (Formerly numbered M102E.) (Same as Classics M153E.) Lecture, three hours. Requisite: course 20 or Classics 10 or 51A. Study of development of art and architecture of Greek world from approximately 490 through 330 B.C. P/NP or letter grading.

M113. Etruscan Art. (4) (Formerly numbered M102F.) (Same as Classics M153F.) Lecture, three hours. Requisite: course 20 or Classics 20 or 51B. Arts of Italic peninsula from circa 1000 B.C. to end of Roman Republic. P/NP or letter grading.

M113B. Roman Art and Archaeology. (4) (Formerly numbered M102G.) (Same as Classics M153G.) Lecture, three hours. Requisite: course 20 or Classics 20 or 51B. Art and architecture of Rome and its Empire from circa 300 B.C. to A.D. 300. P/NP or letter grading.

M113C. Late Roman Art. (4) (Formerly numbered M102H.) (Same as Classics M153H.) Lecture, three hours. Requisite: course 20 or Classics 20 or 51B. Art of Roman Empire from 2nd through 4th century (A.D.). P/NP or letter grading.


C114D. Selected Topics in Ancient Art. (4) Lecture, three hours. Variable topics in ancient art that reflect interests of individual regular and/or visiting faculty members. May be repeated twice for credit. Concurrently scheduled with course C214D. P/NP or letter grading.

119A. Western Islamic Art. (4) (Formerly numbered 104A.) Lecture, three hours. From Tigris and Euphrates Rivers to Spain, 7th to 16th century. P/NP or letter grading.

119B. Eastern Islamic Art. (4) (Formerly numbered 104B.) Lecture, three hours. From Tigris and Euphrates Rivers through Afghanistan and parts of central Asia; Ottoman Empire. P/NP or letter grading.

M119C. Introduction to Islamic Archaeology. (4) (Formerly numbered M104D.) (Same as Islamic Studies M111 and Middle Eastern Studies M111.) Lecture, three hours. From origins of urban settlements of Islam in Arabia and Jerusalem to humble remains of small Egyptian port, broad focus on archaeological and standing remains in central Islamic lands (primarily Syria, Egypt, and Iraq); Turkey, Iran, China, North Africa, and Spain. Profound cultural transformations occurred from birth of Islam in 7th century to early Ottoman period in 16th and 17th centuries, which are traceable in material records. Assessment of effective...
M119D. Archaeology and Art of Christian and Islamic Egypt. (4) (Same as Archaeology M112, Islamic Studies M112, and Middle Eastern Studies M112.) Lecture, three hours. Culture of Egypt transformed gradually after Muslim conquest in mid-7th century C.E. According to material evidence such as ceramics, textiles, architectural forms, and building techniques, it is functionally impossible to separate pre-Islamic Christian Egypt from early Islamic Egypt. Although population may have become largely Muslim by 10th century, Egypt remained Coptic in many senses even to 14th century and retains sizeable Christian minority to present. Survey of archaeology remains and standing architecture of Egypt from 6th to 19th century, charting changes and continuities in material culture and shifts in human geography and land use. P/NP or letter grading.

C120. Selected Topics in Islamic Art. (4) (Formerly numbered C104C.) Lecture, three hours. Variable topics in Islamic art and architecture that reflect interests of individual regular and/or visiting faculty members. May be repeated twice for credit. Concurrently scheduled with course C220A. P/NP or letter grading.

121A. Italian Renaissance Art of 14th Century. (4) (Formerly numbered 109A.) Lecture, three hours. Art and architecture of 14th century. P/NP or letter grading.


121C. Italian Renaissance Art of 16th Century. (4) (Formerly numbered 109C.) Lecture, three hours. Art and architecture of 16th century. P/NP or letter grading.

121D. Late Renaissance Art: Counter-Reformation. (4) (Formerly numbered 106D.) Lecture, three hours. Requisite: course 22. Painting, sculpture, and architecture of late 16th and early 17th centuries considered in context of Counter-Reformation. P/NP or letter grading.

124. Northern Renaissance Art. (4) (Formerly numbered 108A.) Lecture, three hours. Requisite: course 22. Painting, architecture in Northern Renaissance. P/NP or letter grading.

C125A. Southern Baroque Art. (4) (Formerly numbered C109A.) Lecture, three hours. Art and architecture of Southern Baroque. Concurrently scheduled with course C225. P/NP or letter grading.


130. Selected Topics in Modern Art. (4) (Formerly numbered 110F.) Lecture, three hours. Requisite: course 23. Changing topics in modern art (post-1970) that reflect interests of individual regular and visiting faculty members. May be repeated once for credit. P/NP or letter grading.

C131A. Contemporary Art, 1940s to 1950s. (4) (Formerly numbered C150A.) Lecture, three hours. Requisite: course 23. Study of major artistic and cultural trends following World War II in U.S. and Europe, covering abstract expressionism to pop art. Concurrently scheduled with course C231A. P/NP or letter grading.


132. Selected Topics in Contemporary Art. (4) (Formerly numbered C117D.) Lecture, three hours. Requisite: course 23. Changing topics in contemporary art (post-1945) that reflect interests of individual regular and/or visiting faculty members. May be repeated once for credit. P/NP or letter grading.

C133A. American Art before Civil War. (4) (Formerly numbered C112A.) Lecture, three hours. Painting, sculpture, and architecture in U.S. from Colonial period through Civil War. Concurrently scheduled with course C233A. P/NP or letter grading.

C133B. American Art in Gilded Age, 1860 to 1900. (4) (Formerly numbered C112B.) Lecture, three hours. Painting, sculpture, and architecture in U.S. from Civil War to turn of century. Concurrently scheduled with course C233B. P/NP or letter grading.

C133C. American Art, 1910 to 1945. (4) (Formerly numbered C112C.) Lecture, three hours. Painting, sculpture, and photography in U.S. from 1910 to 1945. Concurrently scheduled with course C233C. P/NP or letter grading.

133D. Architecture in U.S. (4) (Formerly numbered 113A.) Lecture, three hours; discussion, one hour. Introduction to architecture built in U.S. over last 5,000 years. Architecture as vehicle for political and cultural authority, urban development, use of natural resources, and in many senses even to 14th century and retains sizeable Christian minority to present. Survey of architecture remains and standing architecture of Egypt from 6th to 19th century, charting changes and continuities in material culture and shifts in human geography and land use. P/NP or letter grading.

C133E. American Houses. (4) (Formerly numbered 113C.) Lecture, three hours. Many historians consider single-family houses to be one of two most American contributions to world architecture (next to skyscrapers). Examination of this claim critically by placing single-family houses in broader context of varied dwellings built and occupied by residents of preindustrial U.S. over last 1,500 years, both aesthetically ambitious houses and ordinary (or vernacular) ones, houses of indigenous groups and those of immigrants from many lands, urban and rural houses, single-family houses and dwellings of all sorts. Offers ways to think about houses we occupy and to understand how they relate to major themes in history of American architecture. P/NP or letter grading.

C135A. African American Art before 1900. (4) (Formerly numbered CM112D.) (Same as African American Studies CM135A.) Lecture, three hours. Detailed inquiry into work of African American artists from Colonial Exposition to 1900. Focus on work of African American artists whose works provide insightful and critical commentary about major features of American life and society. Concurrently scheduled with course C235A. P/NP or letter grading.

C135B. African American Art, 1900 to 1963. (4) (Formerly numbered CM112E.) (Same as African American Studies CM135B.) Lecture, three hours. Detailed inquiry into work of African American artists from 1900 to 1963. Focus on work of African American artists whose works provide insightful and critical commentary about major features of American life and society. Concurrently scheduled with course C235B. P/NP or letter grading.

C137. Arts of Native North America. (4) (Formerly numbered 118D.) Lecture, three hours. Survey of painting, sculpture, and other arts from prehistoric to present in Caribbean and Southwestern U.S. P/NP or letter grading.

C139A. Mayan Art and Architecture. (4) (Formerly numbered C117B.) Lecture, three hours. Requisite: course 27. Study of art of selected Maya-speaking cultures of southern Mesoamerica from circa 2000 B.C. to Conquest, with particular emphasis on history and iconography. Concurrently scheduled with course C239A. P/NP or letter grading.

C139B. Aztec Art and Architecture. (4) (Formerly numbered C117D.) Lecture, three hours. Requisite: course 27. Painting, sculpture, architecture, and other arts of Nahua-speaking peoples of central Mexico, with emphasis on their social and historical context and major scholarly debates. Concurrently scheduled with course C239B. P/NP or letter grading.

C139C. Inca Art and Architecture. (4) (Formerly numbered C117F.) Lecture, three hours. Exploration of art, architecture, and urbanism of Incas from their emergence as a powerful political force in late 15th century to their political and cultural fragmentation during Spanish occupation of Andes (1532 to 1824). Concurrently scheduled with course C239C. P/NP or letter grading.

C140. Selected Topics in Art of Indigenous Americas. (4) Lecture, three hours. Variable topics in artistic production of Native people across Americas that reflect interests of individual regular and/or vis-

C142A. Mexican Art in Modern Age. (4) (Formerly numbered C110L) Lecture, three hours. Mexican art of 19th-20th centuries, from foundation of academy in 1785 to present day. Study of art and revolution, muralism, surrealism, indigenism, postcolonialism, and postmodernism in painting, sculpture, prints, photography, and architecture. Concurrently scheduled with course C242A. P/NP or letter grading.

C142B. Latin American Art of 20th Century. (4) (Formerly numbered C110H) Lecture, three hours; discussion, one hour (when scheduled). Mainstream modern and contemporary art and architecture of select Latin American countries, including both modernist and postmodernist forms, considered in context of social and political concerns, both national and international, with emphasis on works of select faculty members. Concurrently scheduled with course C242B. P/NP or letter grading.

143. Selected Topics in Latin American Art. (4) Lecture, three hours. Varietal topics in Latin American art that reflect interests of individual regular and/or visiting faculty members. May be repeated twice for credit. P/NP or letter grading.

144. Caribbean Art. (4) (Formerly numbered 118B) Lecture, three hours. Cultural history of Caribbean. P/NP or letter grading.

C145A. Architecture and Urbanism in Africa. (4) (Formerly numbered C119D) Lecture, three hours. Survey of African built environment at various moments and in different places from about 200 C.E. to present, with emphasis on cultural, social, and historical contexts of architecture, gender, and space, and contemporary African cities. Concurrently scheduled with course C245A. P/NP or letter grading.

C145B. Contemporary Arts of Africa. (4) (Formerly numbered C119C) Lecture, three hours; discussion, one hour (when scheduled). Survey of African visual practices since mid-20th century, with special emphasis on changing meaning of art object, status of African artist, global reception of contemporary African art, and very definitions of contemporary African art. Concurrently scheduled with course C245B. P/NP or letter grading.


C148A. Art and Material Culture, Neolithic to 210 B.C. (4) (Formerly numbered C115D) Lecture, three hours. Genesis of Chinese civilization in light of new archaeological finds, including sites and works of art (e.g., ceramics, bronzes, jades). Concurrently scheduled with course C248A. P/NP or letter grading.

C148B. Art and Material Culture of Early Imperial China, 210 B.C. to A.D. 906. (4) (Formerly numbered C115E) Lecture, three hours. Palaces and tombs of early Chinese emperors, Imperial of Buddhist art (cave temples), rise of new media and technologies. Concurrently scheduled with course C248B. P/NP or letter grading.

C148C. Art and Material Culture of Late Imperial China, 906 to 1911. (4) (Formerly numbered C115F) Lecture, three hours. Secular and religious (Buddhist and Taoist) architecture, painting, sculpture, and various decorative media (lacquer, porcelain, textiles, jade, bronze, furniture, wood and bamboo carving, etc.). Concurrently scheduled with course C248C. P/NP or letter grading.

C148D. Advanced Chinese Art. (4) (Formerly numbered C119B) Lecture, three hours. Study in Chinese painting and sculpture. Concurrently scheduled with course C248D. P/NP or letter grading.

C148E. Art in Modern China, (4) (Formerly numbered C115G) Lecture, three hours; Concentrated look at major schools and masters of Chinese art from turn of 20th century to present, with focus on interaction with foreign cultures and issues of self-identity, assimilation, modernity, tradition, and continuity. Consideration of recent developments in Chinese art in global context. Concurrently scheduled with course C248E. P/NP or letter grading.


C148G. Gardens in Chinese Art and Culture. (4) Lecture, three hours. Overview of practice, theory, and representation of Chinese gardens in their historical, philosophical, artistic, social, and cultural contexts through literary writings, paintings, and aspects of material culture. Concurrently scheduled with course C248G. P/NP or letter grading.

C149. Selected Topics in Chinese Art. (4) (Formerly numbered C115I) Lecture, three hours. Variable topics in Chinese art that reflect interests of individual regular and/or visiting faculty members. May be repeated twice for credit. Concurrently scheduled with course C249A. P/NP or letter grading.

150A. Japanese Art. (4) (Formerly numbered 114C) Lecture, three hours. Emphasis on development of Buddhist art and its relationship with culture. P/NP or letter grading.


C151. Selected Topics in Japanese Art. (4) Lecture, three hours. Variable topics in Japanese art that reflect interests of individual regular and/or visiting faculty members. May be repeated twice for credit. Concurrently scheduled with course C251A. P/NP or letter grading.

152A. Arts of Korea. (4) (Formerly numbered 114E) Lecture, three hours; museum field trip. Introduction to arts and archaeology on Korean peninsula from Neolithic beginnings to early 20th century through analysis and discussion of selection of monuments and objects within technological, stylistic, religious, cultural, and sociopolitical contexts. Special emphasis on diversity of topics and social status of artists during Choson dynasty (1392 to 1910). Concurrently scheduled with course C252A. P/NP or letter grading.

C152B. History of Korean Painting. (4) (Formerly numbered C140A) Lecture, three hours. Limited to juniors/seniors. Korean painting history from Three Kingdoms period to 19th century, examined within cultural and sociopolitical contexts. Special emphasis on diversity of topics and social status of artists during Choson dynasty (1392 to 1910). Concurrently scheduled with course C252B. P/NP or letter grading.

C152C. History of Korean Ceramics. (4) (Formerly numbered C114C) Lecture, three hours. Limited to juniors/seniors. History of Korean ceramics from Neolithic period to 19th century, with special emphasis on technological and stylistic developments. Concurrently scheduled with course C252C. P/NP or letter grading.

C152D. History of Korean Buddhist Art. (4) (Formerly numbered C140C) Lecture, three hours. Limited to juniors/seniors. History of Korean Buddhist art from three Kingdoms dynasty to 20th century, with special emphasis on Buddhist iconography and relationship between sculpture, painting, and architecture. Concurrently scheduled with course C252C. P/NP or letter grading.

C153. Selected Topics in Korean Art. (4) (Formerly numbered C140D) Lecture, three hours. Limited to juniors/seniors. Variable topics in Korean art that reflect interests of individual regular and/or visiting faculty members. May be repeated twice for credit. Concurrently scheduled with course C253A. P/NP or letter grading.

154A. Early Art of India. (4) (Formerly numbered 114A) Lecture, three hours. Not open to freshmen. Survey of Indian art from Indus Valley cultures to 10th century. Emphasis on Buddhist art, last efflorescence of Hindu backgrounds of arts. P/NP or letter grading.

154B. Later Art of India. (4) (Formerly numbered 114D) Lecture, three hours. Not open to freshmen. Survey of Indian art from 10th to 19th century. Decline of Buddhist art, last efflorescence of Hindu architecture, Muslim painting and architecture, and Rajput painting. P/NP or letter grading.

C154C. Advanced Indian Art. (4) (Formerly numbered C114A) Lecture, three hours. Requisite: course 154A. Study in Indian sculpture and architecture. Concurrently scheduled with course C254A. P/NP or letter grading.

154D. Modern and Contemporary South Asian Art. (4) (Formerly numbered 119C) Lecture, three hours; discussion, one hour (when scheduled). Topics in modern and contemporary South Asian art from 1900 to present. P/NP or letter grading.

C155A. Selected Topics in South and Southeast Asian Art. (4) Lecture, three hours. Emphasis on development of Buddhist art and art related to countries in South and Southeast Asia. May be repeated twice for credit. Concurrently scheduled with course C255A. P/NP or letter grading.

156. Arts of Southeast Asia. (4) (Formerly numbered 114F) Lecture, three hours. Not open to freshmen. Southeast Asian art from its beginning in prehistory through 19th century. Study of art of selected cultures from Burma, Malaysia, Thailand, Cambodia, Vietnam, and Indonesia. P/NP or letter grading.

C158A. Selected Topics in Asian Arts and Architecture. (4) Lecture, three hours. Variable topics in Asian art and architecture that reflect interests of individual regular and/or visiting faculty members. May be repeated twice for credit. Concurrently scheduled with course C258A. P/NP or letter grading.

160. Art and Empire. (4) (Formerly numbered C118A) Lecture, three hours. Examination of relationship between art and imperial ideologies and introduction to current issues in colonial studies and postcolonial criticism. Concurrently scheduled with course C260A. P/NP or letter grading.

161. Cities in History. (4) (Formerly numbered 113B) Lecture, three hours; discussion, one hour. Examination of history of cities worldwide, locating cities in their aesthetic, social, and cultural contexts. History of cities from origins of urbanism to present, with focus on recent centuries. P/NP or letter grading.

C169. Selected Topics in Architectural History. (4) Lecture, three hours. Variable topics in architectural history that reflect interests of individual regular and/or visiting faculty members. May be repeated twice for credit. Concurrently scheduled with course C269. P/NP or letter grading.

C170A. Museum Studies. (4) (Formerly numbered C103A) Lecture, three hours; discussion, one hour (when scheduled). Introduction to museology as critical practice, with emphasis on theory and museum of museums and impact of culture and society on current museum theory and practice. Concurrently scheduled with course C270A. P/NP or letter grading.

C170B. Museum Studies Practicum. (2 to 4) (Formerly numbered C103C) Lecture, three hours. On-site examination and discussion of selected artworks, exhibitions, and associated published and distributed materials, and of museum and gallery institutions, practices, and policies. Concurrently scheduled with course C270B. Letter grading.

C171. Selected Topics in Museum Studies. (Seminar, three hours. Requisite topics in museum studies that reflect interests of individual regular and/or visiting faculty members. Not open to credit with topic change. Concurrently scheduled with course C271. P/NP or letter grading.
196. Research Apprenticeship in Art History. (2 to 4) Tutorial, three hours per week per unit. Limited to juniors/seniors. Entry-level research apprenticeship for upper-division students under guidance of faculty mentor. May be repeated for credit. Individual contract required.

197A. Individual Studies in Art History. (2 to 4) For- merly numbered 197.' Tutorial, to be arranged. Prepara- tion: 3.0 grade-point average in major. Limited to seniors, individual intensive study, with assigned instructor and scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Not more than eight units may be applied toward major. Individual contract required. P/NP or letter grading.

197B. Individual Capstone Studies. (2) Tutorial, two hours. Limited to departmental junior/senior majors and minors. Guided study led by faculty supervisor. Instructor meets with student to help design culminating capstone project so it conforms to departmental capstone project guidelines. Must be taken in conjunction and concurrently with one upper-division departmental course. May not be repeated for credit. Individual contract required. P/NP or letter grading. 198A-198B. Honors Research in Art History. (4-4) Tutorial, to be arranged. Preparation: completion of minimum of four upper-division art history courses with 3.5 departmental grade-point average and overall 3.0 grade-point average. Limited to junior/se- nior Art History and History/Art History majors. Two- term independent research project under supervision of appropriate faculty member, culminating in departmental honors thesis of approximately 30 pages. Indi- vidual contract required. In Progress (198A8 and letter 198B8 grading).

199. Directed Research in Art History. (2 to 4) Tuto- rial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract re- quired. P/NP or letter grading.

Graduate Courses

200. Art Historical Theories and Methodologies. (4) Seminar, three hours. Critical examination of the- ory of discipline of art history, with studies of various theoretical, critical, and methodological approaches to visual arts from antiquity to present. May be repeated for credit with consent of adviser. S/U or letter grading.

201. Topics in Historiography of Art History. (4) Seminar, three hours. Critical examination of historio- graphic traditions of specific areas and fields within discipline of art history. May be repeated for credit on particular time periods, geographical areas, artistic traditions, or work of one or more authors. May be repeated for credit with consent of adviser. S/U or letter grading.

202. Topics in Theory and Criticism in Art History. (4) Seminar, three hours. Focused studies of various theoretical and critical traditions within art history, concentrating on particular issues, authors, or meth- odologies either within or across historical and cul- tural areas. May be repeated for credit with consent of adviser. S/U or letter grading.

203. Topics in Architectural History and Theory. (4) Seminar, three hours. Focused studies of various the- oretical and critical traditions within architectural his- tory, concentrating on particular issues, authors, or methodologies either within or across historical, geo- graphic, and cultural areas. May be repeated for credit with consent of adviser. S/U or letter grading.

207. Consortium Scholar Seminar at Getty Re- search Institute. (4) Seminar, three hours. Intramural graduate seminar at Getty Museum in collaboration with Getty Research Institute. Topics, formats, and number of students and faculty may vary. S/U or letter grading.

210. Egyptian Art. (4, 5) Seminar, two hours. Requi- sites: courses M110A, M110B, M111. Art in Egypt during Late period and Greco-Roman period. Stu- dents should be ready to prepare for every meeting. May be repeated for credit. P/NP or letter grading.

212A. Topics in Aegean Art. (4) Formerly numbered 211.) Seminar, two hours. Requisites: courses M111, M113. Theory and development of Aegean Bronze Age (3000 to 1000 B.C.). Monuments or theoretical prob- lems related to art and culture of Crete, Greece, Cy- clades, or Western Anatolia. May be repeated for credit. S/U or letter grading.

212B. Topics in Classical Art. (4) Formerly num- bered 221.) Seminar, two to three hours. Studies in Parthian art. Site-by-site survey of Near East (Afghan-istan, Iran, Iraq, Syria) during period of Greek and Parthian control. May be repeated for credit with consent of adviser. S/U or letter grading.

212C. Classical Art. (4) Formerly numbered 223.) Seminar, two hours. Studies in Greco-Roman art and archaeology. Studies of specific periods, sites, or ar- tistic media. May be repeated for credit with consent of adviser. S/U or letter grading.

214D. Selected Topics in Ancient Art. (4) Lecture, three hours. Varies in topics in ancient art that reflect interests of individual regular and/or visiting faculty members. May be repeated twice for credit. Concur- rently scheduled with course C114D. S/U or letter grading.

215A. Late Antique Art and Architecture. (4) Lec- ture, three hours. Art and architecture of late Roman Empire and early Christian world. Concurrently scheduled with course CM115A. S/U or letter grading.


216B. Late Byzantine Art and Architecture. (4) Lecture, three hours. Theory and development of Byz- antine art from 1204 to 1453. Concurrently scheduled with course C116B. S/U or letter grading.

217A. Medieval Archaeology. (4) Lecture, three hours. Archaeology of medieval world. Concurrently scheduled with course C117A. S/U or letter grading.

217B. Selected Topics in Medieval Art. (4) Lecture, three hours. Varies topics in medieval art that reflect interests of individual regular and/or visiting faculty members. May be repeated twice for credit. Concur- rently scheduled with course C117B. S/U or letter grading.

217C. Medieval Art. (4) Formerly numbered 225.) Seminar, two hours. Studies in selected topics in Byz- antine and European medieval art. May be repeated for credit with consent of adviser. S/U or letter grading.

217D. Byzantine Art, Architecture, and Archaeolo- gy. (4) Seminar, two hours. Selected topics in Byzan- tine art and architecture. May be repeated for credit with consent of adviser. S/U or letter grading.

218. Selected Topics in Armenian Art. (4) Lecture, three hours. Varies topics in Armenian art that re- flect interests of individual regular and/or visiting fac- ulty members. May be repeated twice for credit. Concur- rently scheduled with course CM118C. S/U or letter grading.

220A. Selected Topics in Islamic Art. (4) Formerly numbered C214.) Lecture, three hours. Varies topics in Islamic art and architecture that reflect interests of
individual regular and/or visiting faculty members. May be repeated twice for credit. Concurrently scheduled with course C120. S/U or letter grading.

220B. Advanced Studies in Islamic Art. (4) (Formerly numbered 213.) Seminar, three hours. Monuments or theoretical problems are selected. Lecture and oral reports are required. Language requirements depend on area of focus. May be repeated for credit with consent of adviser. S/U or letter grading.

221. Italian Renaissance Art. (4) (Formerly numbered 230.) Seminar, two hours. Preparation: knowledge of German. Emphasis on selected topic (e.g., particular artist, trend, or problem). Research papers and oral reports required. May be repeated for credit with consent of adviser. S/U or letter grading.

222A. Northern Renaissance Art. (4) (Formerly numbered 236.) Seminar, two hours. Preparation: knowledge of various aspects of B. Art History / 163

C225. Southern Baroque Art. (4) (Formerly numbered C209A.) Lecture, three hours. Art and architecture of Spain or Italy, 16th to late 17th century. Concurrently scheduled with course C105A. S/U or letter grading.

225B. Early Modern Art. (4) (Formerly numbered 240.) Seminar, three hours. Emphasis on selected topic (e.g., particular artist, trend, or problem). Research papers and oral reports are required. Language requirements depend on area of focus. May be repeated for credit with consent of adviser. S/U or letter grading.

226. Selected Topics in Early Modern Art. (4) Lecture, three hours. Variable topics in early modern art that reflect interests of individual regular and/or visiting faculty members. May be repeated twice for credit. Concurrently scheduled with course C126. S/U or letter grading.

C230A-C230B-C230C. History of Photography, 4-4-4 (Formerly numbered C217A-C217B-C217C.) Concurrently scheduled with courses C128A-C128B-C128C. S/U or letter grading. C228A, 1839 to 1910. Lecture, three hours. Studies of origin, social functions, and development of photography in 19th and early 20th centuries, from Niépce to Atget. C228B, 1910 to Present. Lecture, three hours; discussion, one hour. History of photography in 20th century, with special attention to photography's entrance into project of avant-garde and its role in formation of postmodern aesthetic. C228C. Selected Topics. Lecture, three hours. Variable topics in history of photography that reflect interests of individual regular and/or visiting faculty members.

228D. History and Theory of Photography. (4) (Formerly numbered 272.) Seminar, three hours. Selected topics in photography history, criticism, and theory. S/U or letter grading.

C229A. Modern Art, 1900 to 1950. (4) (Formerly numbered C247.) Lecture, three hours; discussion, one hour. Inquiry into 20th-century modernism from Fauvism to abstract expressionism. Topics include primitivism, gender, and sexuality in modernist art; or origins of abstraction, collage, photomontage, and ready-made; rise of automatism and chance procedures; art, utopia, and political revolution; antitraditionalism and fascism; mass culture, machine paradigm, and work of art in age of mechanical reproduction. Concurrently scheduled with course C129A. S/U or letter grading.

C229B. Dada, 1915 to 1923. (4) (Formerly numbered C249A.) Lecture, three hours; discussion, one hour (when scheduled). Introduction to modernism and historical avant-garde of early 20th century, tracing in detail development of avant-garde in various geographical locales during and after World War I. Visual art, literature, film, and performance addressed, with special attention to invention of series of avant-garde strategies crucial to Dada: ready-made, chance procedures, mechanical drawing, and photomontage. Concurrently scheduled with course C129B. S/U or letter grading.

C229C. Surrealism, 1924 to 1939. (4) (Formerly numbered C249B.) Lecture, three hours; discussion, one hour (when scheduled). Study of art, literature, and film associated with surrealist movement in France, with special attention to dissident surrealist philosopher Georges Bataille, as well as to challenge to art history posed by surrealism's engagement with lessons of psychoanalysis. Concurrently scheduled with course C129C. S/U or letter grading.

230A. European Art, 1700 to 1900. (4) (Formerly numbered 245S.) Seminar, two hours. May be repeated for credit with consent of adviser. S/U or letter grading.

M230B-M230C. Seminars: Modern European History, 4 (4-4) (Formerly numbered M241A-M241B, M242A-M242B, M243A-M243B.) Concurrently scheduled with course C129D. S/U or letter grading. (Formerly numbered C272.) Seminar, three hours. Preparation: knowledge of German. Emphasis on selected topic (e.g., particular artist, trend, or problem). Research papers and oral reports required. May be repeated for credit with consent of adviser. S/U or letter grading.

C231A. Contemporary Art, 1940s to 1950s. (4) (Formerly numbered C247B.) Lecture, three hours. Emphasis on selected topic (e.g., particular artist, trend, or problem). Research papers and oral reports are required. Language requirements depend on area of focus. May be repeated for credit with consent of adviser. S/U or letter grading.

C232. Contemporary Art. (4) (Formerly numbered 251.) Seminar, three hours. Selected topics in contemporary art, criticism, and theory. S/U or letter grading.

C233A. American Art before Civil War. (4) (Formerly numbered C212A.) Lecture, three hours. Painting, sculpture, and architecture in U.S. from Colonial period through Civil War. Concurrently scheduled with course C131A. S/U or letter grading.

C233B. American Art in Gilded Age, 1860 to 1900. (4) (Formerly numbered C212B.) Lecture, three hours. Painting, sculpture, and architecture in U.S. from Civil War to turn of century. Concurrently scheduled with course C131B. S/U or letter grading.

C233C. American Art, 1900 to 1945. (4) (Formerly numbered C212C.) Lecture, three hours. Painting, sculpture, and photography in U.S. from 1900 to 1945. Concurrently scheduled with course C131C. S/U or letter grading.

C234. American Art. (4) (Formerly numbered 255.) Seminar, two hours. Requisite: course C233A, or C233B or C233C, depending on topic. Topics in American art from Colonial period to present. Discussion of weekly readings, student presentations, and papers. May be repeated for credit with consent of adviser. S/U or letter grading.

CM235A. African American Art. (4) (Formerly numbered CM212A.) (Same as African American Studies CM225A.) Lecture, three hours. Detailed inquiry into work to circa 1900 of African American artists whose works provide insightful and critical commentary about major features of American life and society. Concurrently scheduled with course CM135A. S/U or letter grading.

CM235B. African American Art, 1900 to 1963. (4) (Formerly numbered CM212B.) (Same as African American Studies CM225B.) Lecture, three hours. Detailed inquiry into African American artists from Columbian Exposition to 1963 March on Washington within context of social, political, and cultural engagement, as well as in codification of modern black life in U.S. Concurrently scheduled with course CM135B. S/U or letter grading.

M236. Topics in African American Art. (4) (Formerly numbered M236.) (Same as African American Studies M236.) Seminar, two hours. Requisite: course CM235A or CM235B. Topics in African American art from 18th century to present. May be repeated for credit with consent of graduate adviser. S/U or letter grading.

C237. Native North American Art. (4) (Formerly numbered C219D.) Seminar, three hours. Study in selected topics in art of American Indians. May be repeated for credit with consent of adviser. S/U or letter grading.

C239A. Mayan Art and Architecture. (4) (Formerly numbered C218B.) Lecture, three hours. Requisite: course 27. Study of art of selected Maya-speaking cultures of southern Mesoamerica from circa 2000 B.C. to Conquest, with particular emphasis on history, iconography. Concurrently scheduled with course C139A. S/U or letter grading.

C239B. Aztec Art and Architecture. (4) (Formerly numbered C218D.) Lecture, three hours. Requisite: courses 27, 32. Study of art of Aztecs, the last pre-Columbian civilization of central Mexico, and the Mexican pre-Columbian art and culture with special emphasis on the Aztec civilization.

C239C. Inca Art and Architecture. (4) Lecture, three hours. Exploration of art, architecture, and urbanism of Incas from their empire's height in late 15th century to Inca empire's abandonment in 1532 and Spanish occupation of Andes (1532 to 1824). Concurrently scheduled with course C139C. S/U or letter grading.

C240A. Selected Topics in Arts of Indigenous Americas. (4) Lecture, three hours. Variable topics in artistic production of Native peoples of the Americas that reflect interests of individual regular and/or visiting faculty members. May be repeated twice for credit. Concurrently scheduled with course C140. S/U or letter grading.

240B. Art and Architecture of Indigenous Ameri- cas. (4) (Formerly numbered C219B.) Seminar, three hours. Studies in selected topics in artistic production of Native people across Americas. May be repeated for credit with consent of adviser. S/U or letter grading.


C242A. Mexican Art in Modern Age. (4) (Formerly numbered C220B.) Lecture, three hours. Art and architecture of colonial Americas from 16th to 20th centuries, from foundation of academy in 1775 to present day. Study of art and revolution, muralism, surrealism, indigenous, postcolonialism, and postmodernism in painting, sculpture, prints, photography, and architecture. Concurrently scheduled with course C142A. S/U or letter grading.

C242B. Latin American Art of 20th Century. (4) (Formerly numbered C254.) Lecture, three hours; discussion, one hour. Study of Latin American and Hispanic art from 19th and 20th centuries, from foundation of academy in 1775 to present day. Study of art and revolution, muralism, surrealism, indigenous, postcolonialism, and postmodernism in painting, sculpture, prints, photography, and architecture. Concurrently scheduled with course C142B. S/U or letter grading.

C245A. Architecture and Urbanism in Africa. (4) (Formerly numbered C216C.) Lecture, three hours. Study of African visual practices since mid-20th century, with special em-
phasis on changing meaning of art object, status of African artist, global reception of contemporary Afri-
can art, and very definitions of contemporary African art. Concurrently scheduled with course C145B. S/U or letter grading.

246. African Art. (4) (Formerly numbered 219C.) Seminar, three hours. Studies in selected topics in art of sub-Saharan Africa. May be repeated for credit with consent of adviser. S/U or letter grading.

247. Oceanic Art. (4) (Formerly numbered 219A.) Seminar; three hours. Studies in selected topics in art of Pacific Islands. May be repeated for credit with consent of adviser. S/U or letter grading.

C248A. Art and Material Culture of Early Imperial China, 210 B.C. to A.D. 906. (4) (Formerly numbered C261B.) Lecture, three hours. Palaces and tombs of early imperial dynasties, impact of Buddhist art (cave temples), role of new media and technologies. Concurrently scheduled with course C144B. S/U or letter grading.

C248B. Art and Material Culture of Early Imperial China, 906 to 1911. (4) (Formerly numbered C261C.) Lecture, three hours. Religious and royal religions (Buddhist and Taoist) architecture, painting, sculpture, and various luxury industries (lacquer, porcelain, textiles, jade, bronze, furniture, wood and bamboo carving, etc.). Concurrently scheduled with course C144C. S/U or letter grading.

C248C. Art and Material Culture of Late Imperial China, 906 to 1911. (4) (Formerly numbered C261D.) Lecture, three hours. Concentrated look at major schools and masters of Chinese art from turn of 20th century to present, with focus on interaction with foreign cultures and issues of self-identity, assimilation, modernity, tradition, and continuity. Consideration of recent developments in Chinese art in global context. Concurrently scheduled with course C148E. S/U or letter grading.

C248D. Advanced Chinese Art. (4) (Formerly numbered C258.) Lecture, three hours. Study in Chinese painting and sculpture. Concurrently scheduled with course C148B. S/U or letter grading.

C248E. Art in Modern China. (4) (Formerly numbered C261D.) Lecture, three hours. Concentrated look at major schools and masters of Chinese art from turn of 20th century to present, with focus on interaction with foreign cultures and issues of self-identity, assimilation, modernity, tradition, and continuity. Consideration of recent developments in Chinese art in global context. Concurrently scheduled with course C148E. S/U or letter grading.

C248F. Advanced Chinese Painting. (4) Lecture, three hours. Examination of classical painting of imperial China through theory and practice. Concurrently scheduled with course C144B. S/U or letter grading.

C248G. Gardens in Chinese Art and Culture. (4) Lecture, three hours. Overview of practice, theory, and representation of Chinese gardens in their historical, philosophical, and cultural contexts through literary writings, paintings, and aspects of material culture. Concurrently scheduled with course C144B. S/U or letter grading.

C249A. Selected Topics in Chinese Art. (4) (Formerly numbered C261E.) Lecture, three hours. Variable topics in Chinese art that reflect interests of individual regular and/or visiting faculty members. May be repeated for credit. Concurrently scheduled with course C1419. S/U or letter grading.

C249B. Chinese Art. (4) (Formerly numbered 260B.) Seminar, three hours. Advanced studies in secular and religious artistic traditions of China. May be repeated for credit with consent of adviser. S/U or letter grading.


C251A. Selected Topics in Japanese Art. (4) Lecture, three hours. Variable topics in Japanese art that reflect interests of individual regular and/or visiting faculty members. May be repeated for credit. Concurrently scheduled with course C151. S/U or letter grading.

C251B. Japanese Art. (4) (Formerly numbered 260C.) Lecture, three hours. Advanced studies in secular and religious artistic traditions of Japan. May be repeated for credit with consent of adviser. S/U or letter grading.

C252A. History of Korean Painting. (4) (Formerly numbered C242A.) Lecture, three hours. Korean painting history from Three Kingdoms period to 19th century, examined within cultural and sociopolitical contexts. Special emphasis on diversity of topics and social status of artists during Choson dynasty (1392 to 1910). Concurrently scheduled with course C152B. S/U or letter grading.

C252B. History of Korean Ceramics. (4) (Formerly numbered C242B.) Lecture, three hours. History of Korean ceramics from Neolithic period to 19th century, with special emphasis on technological and stylistic developments. Concurrently scheduled with course C152C. S/U or letter grading.

C252C. History of Korean Buddhist Art. (4) (Formerly numbered C242C.) Lecture, three hours. History of Korean Buddhist art from Three Kingdoms period to Choson dynasty, with special emphasis on Buddhist iconography and relationship between sculpture, painting, and architecture. Concurrently scheduled with course C152D. S/U or letter grading.

C253A. Selected Topics in Korean Art. (4) (Formerly numbered C242D.) Lecture, three hours. Variable topics in Korean art that reflect interests of individual regular and/or visiting faculty members. May be repeated twice for credit. Concurrently scheduled with course C153. S/U or letter grading.

C253B. Selected Topics in Korean Art. (4) (Formerly numbered 243.) Lecture, three hours. Studies of Korean art under different art-historical perspectives, methods, and theories. Individual studies, with emphasis on professional presentation. Group studies may be linked to exhibition projects. May be repeated with consent of instructor. S/U or letter grading.

C254A. Advanced Indian Art. (4) (Formerly numbered C257.) Lecture, three hours. Requisite: course 154A. Study in Indian sculpture and architecture. Concurrently scheduled with course C154C. S/U or letter grading.

C254B. Modern and Contemporary South Asian Art. (4) (Formerly numbered 280C.) Lecture, three hours. Topics in modern and contemporary South Asian art from 1900 to present. Letter grading.

C255A. Selected Topics in South and Southeast Asian Art. (4) Lecture, three hours. Variable topics in South and Southeast Asia. May be repeated twice for credit. Concurrently scheduled with course C155. S/U or letter grading.

C255B. Indian Art. (4) (Formerly numbered 260A.) Lecture, three hours. Study in Indian secular and religious art and cultural artistic traditions of India. May be repeated for credit with consent of adviser. S/U or letter grading.

C258A. Selected Topics in Asian Arts and Architecture. (4) Lecture, three hours. Variable topics in Asian arts and architecture that reflect interests of individual regular and/or visiting faculty members. May be repeated twice for credit. Concurrently scheduled with course C158A. S/U or letter grading.

M258B. Topics in Art: Fakes, Forgeries, and Authenticity. (4) (Formerly numbered M262A.) Same as Anthropology M216.) Seminar, three hours. Designed for graduate students. Topics may include identification of ethnic groups in archaeology, archaeology of religion, archaeological reflections of commerce and trade and their influence on social development, archaeology of language dispersal, cultural contact and nature of cultural influence. S/U or letter grading.

259C. Fieldwork in Archaeology. (2 to 8) (Formerly numbered 265.) Fieldwork, to be arranged. Participation in archaeological excavations or other archaeological research under supervision of staff. May be repeated for credit with consent of adviser. S/U or letter grading.

C260A. Art and Empire. (4) (Formerly numbered C280A.) Lecture, three hours. Examination of relationship between art and imperial ideologies and introduction to current issues in colonial studies and postcolonial criticism. Concurrently scheduled with course C160. S/U or letter grading.

260B. Problems in Postcolonial Criticism. (4) (Formerly numbered 280D.) Seminar, three hours. Advanced study of current theoretical debates concerning colonial and postcolonial history and society. Letter grading.

C269. Selected Topics in Architectural History. (4) Lecture, three hours. Variable topics in architectural history that reflect interests of individual regular and/or visiting faculty members. May be repeated twice for credit. Concurrently scheduled with course C169. S/U or letter grading.

C270A. Museum Studies. (4) (Formerly numbered C203A.) Lecture, three hours. Discussion, one hour (when scheduled). Introduction to museology as critical practice, with emphasis on history and theory of museums and impact of culture and society on current museum theory and practice. Concurrently scheduled with course C170A. S/U or letter grading.

C270B. Museum Studies Practicum. (2 to 4) (Formerly numbered C203C.) Lecture, three hours. On-site examination and discussion of selected artworks, exhibitions, and associated published and distributed materials, and of museum and gallery institutions, practices, and policies. Concurrently scheduled with course C170B. Letter grading.

C271. Selected Topics in Museum Studies. (4) (Formerly numbered 203D.) Seminar, three hours. Variable topics in museum studies that reflect interests of individual regular and/or visiting faculty members. May be repeated for credit with topic change. Concurrently scheduled with course C171. S/U or letter grading.

C272A. Preservation of Art. (4) (Formerly numbered C203E.) Lecture, three hours. Designed for anthropologists, archaeologists, and art history graduate students. Introduction to preservation of cultural heritage materials, including what should be preserved and why, as well as who should be involved in decision-making process. Discussion of issues of preservation and restoration of these cultural heritage materials both in museum and outdoor environments. Materials and techniques used to make cultural heritage materials, in relation to preservation efforts needed to prevent decay and loss. Introduction to examples of conservation issues related to sites, buildings, monuments, and collections. Ethical and contextual contexts with reference to issues, illustrating how cultural materials may have been treated differently according to those values. Concurrently scheduled with course C172A. S/U or letter grading.

C272B. Restoration, Preservation, and Conserva-
tion. (4) (Formerly numbered 204.) Seminar, three hours. May not be repeated. S/U or letter grading.

C272C. Art: Fakes, Forgeries, and Authenticity. (4) (Formerly numbered C203G.) Lecture, three hours. Examination of concepts of authenticity, originality, fakes, and forgeries in art. Overview of problems inherent in concept of authenticity and description of many examples of problems related to this concept in series of discussions based on objects from variety of cultures. Introduction to subject of fakes and account of three different areas of connoisseurship that are essential component of production, study, and scientific examination of fakes. Nature of art connoisseurship described in many examples from Renaissance and earlier panel paintings, as well as antiques and tradi-
tional African arts. Secular and religious art and art conservation discussed in relationship to authen-
ticity and technical studies. Scientific tools that form basis of another kind of connoisseurship described in terms of dating techniques that are directly to works of art and technical methods by which material constituents of works of art are studied. Concurrently scheduled with course C172B. S/U or letter grading.
ARTS AND ARCHITECTURE
School of the Arts and Architecture
2200 Broad Art Center
Box 951620
Los Angeles, CA 90095-1620
310-206-3564
students@arts.ucla.edu
http://www.arts.ucla.edu

Scope and Objectives
There is no major in arts and architecture; however, the following courses are part of the schoolwide curriculum.

Arts and Architecture

Lower-Division Course

10. Arts Encounters: Exploring Arts Literacy in 21st Century. (5) Lecture, four hours; discussion, one hour; field trips, three hours; outside study, seven hours. Through series of direct encounters with art and artists across global range of practices, course equips students with kinds of critical skills that enhance their understanding of, and sharpen their appetite for, wide range of artistic practices. Attendance at performance/art events outside normal class schedule is mandatory. P/NP or letter grading.

Upper-Division Course

100. Selected Topics in Arts. (4) Lecture, four hours; discussion and/or laboratory, three hours; outside study, five hours. Selected topics in arts explored through variety of approaches that may include projects, readings, studio work, performance, discussion, research papers, and oral presentations. Topics announced in advance. May be repeated for maximum of 8 units. P/NP or letter grading.

ASIAN AMERICAN STUDIES
College of Letters and Science
3336 Rolfe Hall
Box 957225
Los Angeles, CA 90095-7225
310-267-5592
http://www.asianam.ucla.edu

Victor Bascara, PhD, Chair

Professors
Mitchell J. Chang, PhD
King-Kok Cheung, PhD
C. Cindy Fan, PhD
Gilbert C. Gee, PhD
Grace Kyungwon Hong, PhD
Jerry Kang, JD (Korea Times-Hankook Ilbo Endowed Professor of Korean American Studies and Law)
Vinay Lai, PhD
Anna S. Lau, PhD
Jinqi Ling, PhD
Purnima Mankekar, PhD
Valerie J. Matsumoto, PhD
Shu-mei Shih, PhD
Renee E. Tajima-Peña, BA (UCLA Alumni and Friends of Japanese Ancestry Professor of Japanese American Studies)
Lois M. Takahashi, PhD
David K. Yoo, PhD
Min Zhou, PhD (Water and Shirley Wang Professor of U.S./China Relations and Communications)

Professors Emeriti
Lane Ryo Hirabayashi, PhD (George T. and Sakyae I. Avatami Professor Emeritus of Japanese American, Incarceration, Redress, and Community)
Marjorie Kagawa-Singer, RN, PhD
Snehendhu B. Kar, DrPH, MSc
David Wong Louie, MFA
Paul M. Ong, PhD

Associate Professors
Victor Bascara, PhD
Lucy M. Burns, PhD
Keith Lujan Camacho, PhD
Allee Moon, PhD
Vinith Mukhiya, PhD
Thu-huong Nguyen-vo, PhD
Kyeyoung Park, PhD
Thomas M. Phillip, PhD
Robert Chao Romero, JD, PhD

Assistant Professor
Michelle L. Caswell, PhD

Lecturers
Stewart Kwob, JD
Glenn K. Omatsu, MA

Adjunct Associate Professor
Tritia Toyota, PhD

Scope and Objectives
The Department of Asian American Studies, founded in 2004, promotes the study of Asian and Pacific Islander Americans across a number of fields and disciplines.

Following the tradition of civil rights struggles of the 1960s and 1970s, the department values the social relevance of academy-based knowledge production, as well as the connection between academia, the Asian and Pacific Islander community, and other disadvantaged social groups. Faculty members in the department are likewise committed to offering a broad, inclusive, and flexible curriculum designed to meet maximum student needs, with emphasis on close mentorship, collaborative teaching, and engaged scholarship.

The department offers a Bachelor of Arts degree, an undergraduate Asian American Studies minor, a Master of Arts degree, and two concurrent degree programs (Asian American Studies MA/Public Health MPH with the Fielding School of Public Health Community Health Sciences Department and Asian American Studies MA/Social Welfare MSW with the Luskin School of Public Affairs Social Welfare Department). The Asian American Studies educational program performs the following missions: (1) conducts teaching that enables students to learn, think, and practice in a nurturing and intellectually stimulating environment, (2) equips students with theoretical and practical knowledge, as well as analytical and communicative skills that reflect the excellence of the faculty, and (3) prepares students either for advanced graduate studies or for life after college as artists, citizens, entrepreneurs, political leaders, and professionals.

As an interdisciplinary field, the Asian American Studies curriculum examines the contemporary realities, diverse experiences, and histories of Asian and Pacific Islander Americans. The topical range of such examination includes community work and development, cultural production (including digital media and creative expression), gender, and generational dynamics, immigration and diaspora, political participation, social activism, and transnational encounters.

The teaching and research methods used by faculty members in the department are interdisciplinary and comparative in nature, with a healthy mix of quantitative, qualitative, interpretive, and applied approaches. These methods develop out of dynamic cross-fertilization among faculty expertise that registers both major intellectual shifts in the field and notable trends from disparate disciplines, professional practices, and epistemological traditions.

Undergraduate Study
The Asian American Studies major is a designated capstone major. Students are required to complete either a community-based applied team research project or an independent scholarly or creative expression project. Those who select the community-based project are expected to use their scholarly knowledge and analytical skills to examine problems facing Asian and Pacific Islander American populations, think creatively and innovatively about evidence-based solutions, and to produce reports that benefit community stakeholders. Those who select to design and complete an independent scholarly or creative expression project pursue a key idea or theme of personal interest that is related to their prior coursework and to the experiences and realities of Asian and Pacific Islander Americans. Through their capstone work, all students are expected to demonstrate their skills in using and synthesizing knowledge gained in disparate courses and communicating effectively their findings and conclusions in a final paper, report, or project and in a public forum.

Asian American Studies BA

Capstone Major
The BA program in Asian American Studies provides a general introduction for students who anticipate advanced work at the graduate level or careers in research, public service, and community work related to Asian and Pacific Islander Americans. An overall grade-point average of 2.0 or better is required for admission to the major.

Preparation for the Major
Required: Two courses from Asian American Studies 10 or 10W, 20, 30 or 30W, 40, 50.

Transfer Students
Transfer applicants to the Asian American Studies major with 90 or more units must complete as many of the following courses as possible prior to admission to UCLA: one lower-division Asian American Studies course or one course that focuses on Asian Americans.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.
The Major

Required: A total of 12 upper-division courses, including one scholarly and creative communications in Asian American Studies course (Asian American Studies 101); one multidisciplinary approaches course selected from 103 through M129 and M172C; one creative expression course selected from 112C, 120, 121, 122B, C142A, C142B, C142C; one diversity course selected from 115, M116, 120, 130A, M130B, M130C, 131A, 131B, 131C, 132A, 132B, 134, 143B, M143C, M165, 167, M169, 174A, 175A; one global/transnational perspectives course selected from 122A, 123, 170, 171A, 171B, 171C, M171D, 171E, M172C, 174B, 175B; one engaged scholarship course selected from 140SL, 141A, 141B, M143A, 195; five Asian American Studies elective courses selected from 103 through 199; and one capstone project course selected from 185 or 186.

No more than 12 graded units of Asian American Studies 195, 197, 198, and 199 may be applied toward the major. Courses 192 and 196 may not be applied toward the major. Each course applied toward the major must be taken for a letter grade (courses offered only on a P/NP grading basis are acceptable), each must be at least 4 units, and students must have an overall grade-point average of 2.0 or better.

Honors Program

Through the Asian American Studies honors program, Asian American Studies majors undertake a year-long thesis or its equivalent with the guidance and supervision of a faculty member. Successful completion of the departmental honors program is indicated on the transcript. For additional information about the departmental honors program, contact the undergraduate academic adviser.

Admission

The honors program is open to junior and senior Asian American Studies majors who have (1) 90 or more total units, (2) a grade-point average of 3.5 or better in upper-division Asian American Studies courses and an overall cumulative GPA of 3.0 or better, and (3) completed two lower-division Asian American Studies courses.

Requirements

Honors students must take the Asian American Studies 198A, 198B, and 198C sequence in which they write a thesis or its equivalent under the direction of a faculty member.

Asian American Studies Minor

The Asian American Studies Minor is designed for students who wish to gain understanding of and competence in Asian American Studies. To enter the minor, students must have an overall grade-point average of 2.0 or better, have completed two lower-division Asian American Studies courses, and file a petition with the undergraduate academic adviser, Asian American Studies Department, 3339 Rolfe Hall.

Required Lower-Division Courses (10 units):

- Two courses from Asian American Studies 10 or 10W, 20, 30 or 30W, 40, 50.

Required Upper-Division Courses (20 units):


No more than 4 graded units of Asian American Studies 195, 197, and 199 may be applied toward the minor. Courses 192 and 196 may not be applied toward the minor. Each course must be taken for a letter grade (courses offered only on a P/NP grading basis are acceptable), each must be at least 4 units, and students must have an overall grade-point average of 2.0 or better.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Asian American Studies offers the Master of Arts (MA) degree in Asian American Studies. Two concurrent degree programs (Asian American Studies MA/Public Health MPH and Asian American Studies MA/Social Welfare MSW) are also offered.

Asian American Studies

Lower-Division Courses

10. History of Asian Americans. (5) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 10W. Multidisciplinary examination of history of Asians and Pacific Islanders in U.S. P/NP or letter grading.

10W. History of Asian Americans. (5) Lecture, three hours; discussion, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 30W. Multidisciplinary introduction to Asian American literature and cultural production, with examination of some combination of novels, short stories, poetry, drama, performance, film, visual art, music, and/or new media. P/NP or letter grading.

30W. Asian American Literature and Culture. (5) Lecture, three hours; discussion, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 30W. Multidisciplinary introduction to Asian American literature and cultural production, with examination of some combination of novels, short stories, poetry, drama, performance, film, visual art, music, and/or new media. Satisfies Writing II requirement. Letter grading.

Asian American Movement. (5) Lecture, three hours; discussion, one hour. Using Asian American movement of late 1960s and 1970s as lens, introduction to social history methods, including role of oral history, documentary films, and archival history, and analysis of primary and secondary sources. Asian American movement situated within larger frame of social change of era and interpretation of nation and society through lives of ordinary men and women. Exploration of campus- and community-based activism, service learning, and civic engagement. P/NP or letter grading.

Asian American Women. (5) Lecture, three hours; discussion, one hour. Overview of history of feminist theory and intersection of gender, class, race/ethnicity from cross-cultural perspectives, with focus on Asian American women's lived experiences in U.S. Topics include Asian American women's roles in family life, work, community organization, social change, and cultural creativity. Examination of broader structural forces that affect women in society, such as racialization, immigration, global capitalism, colonialism and postcolonialism, and social movements. P/NP or letter grading.

97. Variable Topics in Asian American Studies. (1 to 2) Tutorial, one to two hours. Current topics and particular research methods in Asian American studies through readings and other assignments. May be repeated for credit. P/NP grading.

Upper-Division Courses

101. Scholarly and Creative Communication in Asian American Studies. (4) Lecture, three hours. Requisites: course 10 or 10W or 20, and either 10 or 10W and 20, or one additional course from 30, 30W, 40, or 50. Designed for advanced junior-senior Asian American Studies majors and minors. Examination of alternative modes of expression to effectively reach academic and nonacademic audiences, including written text, visual materials, and performance. Exploration of scholarly works by looking at how narratives are developed, ideas and values are framed, or knowledge is generated and transmitted, through either traditional or electronic mediums. Incorporation of different forms of communication, including personal stories, working knowledge, popular media, elements of the creative arts, and the role of personal experience in the writing of narrative. P/NP grading.

108. Leadership and Student-Initiated Retention. (5) Lecture, one hour; discussion, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 108. Multidisciplinary introduction to contemporary Asian American populations and communities in U.S. Topics include contemporary immigration, demographic trends, sociocultural, economic, and political issues, and interethnic relations. P/NP or letter grading.

20. Contemporary Asian American Communities. (5) Lecture, three hours; discussion, one hour. Multidisciplinary introduction to contemporary Asian American populations and communities in U.S. Topics include contemporary immigration, demographic trends, sociocultural, economic, and political issues, and interethnic relations. P/NP or letter grading.

20. Contemporary Asian American Communities. (5) Lecture, three hours; discussion, one hour. Multidisciplinary introduction to contemporary Asian American populations and communities in U.S. Topics include contemporary immigration, demographic trends, sociocultural, economic, and political issues, and interethnic relations. P/NP or letter grading.

20. Contemporary Asian American Communities. (5) Lecture, three hours; discussion, one hour. Multidisciplinary introduction to contemporary Asian American populations and communities in U.S. Topics include contemporary immigration, demographic trends, sociocultural, economic, and political issues, and interethnic relations. P/NP or letter grading.

20. Contemporary Asian American Communities. (5) Lecture, three hours; discussion, one hour. Multidisciplinary introduction to contemporary Asian American populations and communities in U.S. Topics include contemporary immigration, demographic trends, sociocultural, economic, and political issues, and interethnic relations. P/NP or letter grading.
113. Asian Americans and Law. (4) Lecture, four hours. Survey of major federal and California case and legislation directed specifically toward Asian Americans from 1850 to World War II and incarceration. Major subject areas include anti-Asian labor legislation, legal prohibitions against Asian rights to try, Executive Order 9066, and equal educational opportunity for Asians. P/N or letter grading.

M114. Asian American Education and Schooling. (4) (Same as Education M103.) Seminar, four hours. Examination of existing body of research from various disciplines on Asian/Pacific American educational experiences. Letter grading.

115. Women and Community in Asian American Studies. (3) Lecture, three hours. Examination of social and historical dynamics and social movement. Works by thematically reflecting pre-1980 period. Issues include of Asian American literature either produced from or forced requisite: English Composition 3 or 3H. Survey hours; discussion, one hour (when scheduled). En-

116. Asian American Social Movements. (4) (Same as Labor and Workplace Studies M116.) Lecture, three hours. Designed for juniors/seniors. Examination of several dimensions of Asian American social movements, including grassroots, mass movement character, political and social vision, and social and political relevance to current issues. How movement participation changes for Asian American women in America. Topics include women in Asian American history, racial and cultural stereotypes, and contemporary issues. Methodological approaches to study of gender issues presented and evaluated. P/N or letter grading.

M117. Asian American Personality and Mental Health. (4) (Same as Psychology M102.) Lecture, three hours. Requisite: Psychology 10. Foundations of personality development and mental health among Asian Americans. Topics include culture, family patterns, achievements, stressors, resources, and immigrant and minority group status. P/N or letter grading.

118. Asian American Religious History. (4) Lecture, four hours. Examination of religion as thematic thread within Asian American history, primarily during period before World War II. Basic grounding in early Asian American history through exploration of role of religion in various communities. P/N or letter grading.

M119. Asian American and Pacific Islander Labor Issues. (4) (Same as Labor and Workplace Studies M119.) Lecture, three hours. Examination of historical and contemporary labor issues in Asian and Pacific Islander communities. Methods include use of primary source material, historical research, political relevance to current issues. How movement participation changes for Asian American women in America. Topics include women in Asian American history, racial and cultural stereotypes, and contemporary issues. Methodological approaches to study of gender issues presented and evaluated. P/N or letter grading.

121. Exploring Asian American Theater. (4) Lecture, four hours. Study of Asian American plays; students required to compose one act based on their own experience using lessons learned in class. Exploration of scene study and acting exercises. P/N or letter grading.

122A. Indigeneity, Empire, and Resistance in Pacific Islands. (4) Lecture, three hours. Introduction to indigenous and colonial histories of Pacific Islands. Discussions, film screenings, guest speakers, and reading assignments, with focus on issues of cultural survival, empire, indigeneity, migration, resistance, sovereignty, and war. P/N or letter grading.

122B. Gender and Film in Pacific. (4) Lecture, three hours. Requisite: course 122A. Exploration of rise of film in Pacific Islands during 20th century, with attention to politics of gender, history, and representation. Engagement in textual and visual readings of feature-length films about Pacific. Discussions, film screenings, and guest speakers, with focus on aesthetic, cultural, economic, gendered, historical, and political dimensions of films. P/N or letter grading.

123. Cultures of/against Empire. (4) Seminar, three hours. Critical concepts and cultural practices linking Asian American studies to study of U.S. cultures of imperialism. Course begins with premise that Asian American studies contribute distinctly to contempo-

124. Comparative Diaspora and Indigeneity. (4) (Same as African American Studies M124.) Lecture, three hours. Examination of the many complexities of diasporic and indigeneity projects, theoretical and methodological approaches to approaching and understanding the experiences of diaspora communities and indigenous groups, and the relationships between them. P/N or letter grading.

M129. Health Issues for Asian Americans and Pacific Islanders: Myth or Model? (4) (Same as Community Health Studies M140J.) Lecture, three hours; fieldwork, one hour. Introduction to overall mental and physical health issues of Asian Americans and Pacific Islanders; identification of gaps in health status indicators and barriers to both care delivery and research for these populations. P/N or letter grading.

M130A. Korean American Experience. (4) Lecture, three hours. Not open to freshmen. Survey of immi-

M130B. Chinese Immigrant Literature and Film. (4) (Same as Chinese M135 and Comparative Literature M171.) Lecture, three hours; discussion, one hour. Knowledge of Chinese not required. In-depth look at Chinese immigrant experience by reading literature and watching films. Theories of diaspora, gender, and race to inform thinking and discussion of relevant is-

M130C. Chinese Immigration. (4) (Same as So-

M131A. Japanese American Experience. (4) Lecture, three hours. Not open to freshmen. Survey of immi-

M131B. Japanese Americans and Incarceration. (4) Seminar, three to four hours. Requisite: course 10 or 16W. Designed for juniors/seniors. In-depth analysis of key literature about mass incarceration of Japa-

M132A. Korean American Experience. (4) Lecture, three hours. In-depth analysis of key literary and critical works that examine the experiences of Korean Americans during World War II. Development of origi-

M132B. Korean American Experience. (4) Lecture, three hours. Requisite: course 10 or 16W. Designed for instru-

M133. Filipino American Experience. (4) Lecture, three hours. Not open to freshmen. Survey of immi-

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lectic may be pursued with guidance from instructor. Sharing and critiquing of other student works in progres-
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contemporary sociocultural, economic, and political issues as they affect status of Pilipino Americans and their community. P/NP or letter grading.


140SL. Power to People: Asian American and Pacific Islander Community-Based Learning. (4) Lecture, two hours; fieldwork, four hours. Enforced requisite: course 10 or 20 or 40. Service-learning course to engage and critically examine community organizations and community-based organizations (CBOs) in Asian American and Pacific Islander communities related to issues such as arts and culture, community health, and applied research. P/NP or letter grading.

141A. Asian American and Pacific Islander Leadership Development Project Part I: Leadership. (4) Lecture, three to four hours. Limited to juniors/seniors. First term of two-term series on leadership development, with focus on intellectual and practical learning of leadership concepts, models, and skills. In Progress grading (credit to be given only on completion of course 141B).

141B. Asian American and Pacific Islander Leadership Development Project Part II: Field Studies. (4) Lecture, three hours; fieldwork, three hours. Enforced requisite: course 141A. Limited to juniors/seniors. Second term of leadership development, with focus on Asian American, Pacific Islander, and other ethnic communities in Los Angeles. Examination of different approaches and strategies to community building and maintenance. P/NP or letter grading.

C142A. Ethnocommunications I: Introduction to Creating Community Media. (Formerly numbered 142A) Seminar, three hours. Strong verbal communication skills and familiarity with technology required. Introduction to social documentary theory and methodology. Through hands-on production, use of digital video to tell visual stories, reclaim history, and examine social issues related to diverse peoples, cultures, and communities. Viewing of films and interactive media for critique and discussion, guest speakers, basic instruction in use of digital video technology, with background in Asian American Studies and Chicano and Chicana Studies. Concurrently scheduled with course C242A. P/NP or letter grading.

C142B. Ethnocommunications II: Intermediate Creating Community Media. (Formerly numbered 142B) Seminar, three hours. Strong verbal communication skills and familiarity with technology required. Intermediate application of social documentary theory and methodology. Use of digital video to create new approaches to storytelling and community building, and examine social issues related to diverse peoples, cultures, and communities. Continuing instruction in use of digital technology and concepts. Topics include videography, composition, sound recording, interviewing techniques, editing, and writing treatments. Completion of community-based documentary required. Concurrently scheduled with course C242B. P/NP or letter grading.


142D. Visualizing History: Introduction to Creating Community Media. (4) Laboratory, three hours. Rapid developments in video and digital technologies have made it possible for previously neglected or submerged minority stories to be visually documented and issues around their migration, settlement, cultural imagery, and artistic expressions. Introduction to ethnocommunications theory and methodology, developed to allow diverse peoples to cultures to reclaim and promote their histories, experiences, and contributions through study, analysis, and vigorous usage of new media technologies, and application of techniques in data collection, analysis, and reporting. Critical reflection of issues related to identity, migration, multiculturalism, tourism, and indigeneous peoples. Projects will be developed from local community included. Given in Hawai'i. P/NP or letter grading.

143B. Politics of Race, Ethnicity, Migration, and Multiculturalism in Hawai'i. (4) Lecture, three hours; discussion, one hour. Critical examination of historical and contemporary experiences of various people in Hawai'i. Investigation of historical, economic, and political contexts of migration and relations between indigenous peoples, migrants, and existing racial and ethnic groups. P/NP or letter grading.

143C. Fieldwork in Asian American and Pacific Islander Communities. (4) (Same as Anthropology M138Q.) Seminar, three hours; discussion, one hour. Continuing study of the field. Seminar and study of techniques in data collection, analysis, and reporting. Critical reflection of issues related to identity, migration, multiculturalism, tourism, and indigenous peoples. Projects to be developed from local community included. Given in Hawai'i. P/NP or letter grading.

140SL. Power to People: Asian American and Pacific Islander Community-Based Learning. (4) Lecture, three hours; fieldwork, three hours. Enforced requisite: course 141A. Limited to juniors/seniors. Second term of leadership development, with focus on Asian American, Pacific Islander, and other ethnic communities in Los Angeles. Examination of different approaches and strategies to community building and maintenance. P/NP or letter grading.

141B. Asian American and Pacific Islander Leadership Development Project Part I: Leadership. (4) Lecture, three hours; fieldwork, three hours. Enforced requisite: course 141A. Limited to juniors/seniors. Second term of leadership development, with focus on Asian American, Pacific Islander, and other ethnic communities in Los Angeles. Examination of different approaches and strategies to community building and maintenance. P/NP or letter grading.

M143C. Ethnic Identity and Ethnic Relations in Hawai'i. (4) (Same as Anthropology M168Q.) Lecture, three hours; discussion, one hour. Continuing study of the field. Seminar and study of techniques in data collection, analysis, and reporting. Critical reflection of issues related to identity, migration, multiculturalism, tourism, and indigenous peoples. Projects to be developed from local community included. Given in Hawai'i. P/NP or letter grading.

M140. Culture, Media, and Los Angeles. (8) (Same as African American Studies M102 and Honors Colle- gium M102.) Lecture, four hours; screenings, two hours. Designed for juniors/seniors. Role of media in society and its influence on contemporary cultural environment, specifically in Los Angeles; issues of representation as they pertain to race, ethnicity, gender, and sexuality. P/NP or letter grading.


M165. Race, Gender, Class. (5) (Same as Compar- ative Literature M175S.) Seminar, three hours. Theoretical and literary readings combined to explore three main aspects of social and cultural experience (race, gender, class) as separate but interconnected spheres affecting both minority and majority popula- tions in U.S. Examination of these issues from com- parative perspectives. P/NP or letter grading.

M166A. Immigrant Rights, Labor, and Higher Edu- cation. (4) (Same as Chicana and Chicano Studies M156A and Labor and Workplace Studies M166A.) Seminar, three hours. New immigrant rights movement, with particular attention to labor and higher education. Overview of history of immigrant rights movement and examination of development of coaliti- on efforts between labor movement and immigrant rights movement nationally and locally. Special focus on issue of immigrant students in higher education. Challenges facing undocumented immigrant students, and Policing and the social and political consequences that have emerged. Students conduct oral histories, family histories, research on immigration and immigrant rights, write poetry and spoken word about immigrant experience, and work to collectively promote the retention of students in higher education. P/NP or letter grading.

M166B. Research on Immigration Rights, Labor, and Higher Education. (4) (Same as Chicana and Chicano Studies M156B and Labor and Workplace Studies M166B.) Seminar, two hours. Enforced requisite: course M166A. Expansion of research conducted by students in course M166A involving oral histories, re- search on immigration/labor/higher education, and evaluation of legislation and legal issues impacting undocumented students. Letter grading.

M167. Worker Center Movement: Next Wave Orga- nizing for Justice for Immigrant Workers. (4) (Same as African American Studies M167, Chicana and Chicano Studies M130, and Labor and Work- place Studies M167.) Seminar, three hours. Develop- ment of theoretical and practical understanding of worker center movement, with focus on historical fac- tors that have led to emergence and growth of worker centers. Role of worker centers in promoting multi- ethnic and multicultural campaigns for workplace and economic justice. Transnational cross-border soli- darity issues and rights of undocumented workers. P/NP or letter grading.


M168. Student-Initiated Retention and Outreach Issues in Higher Education. (4) (Same as African American Studies M118, Chicano and Chicano Studies M118, and Chicana and Chicano Studies M118B.) Lecture, four hours. Exploration of issues in outreach and retention of students in higher education, especially through student-initiated projects, events, activities, and services, with focus on UCLA as case. May be re- repeated twice for credit. Letter grading.

M169. Constructing Race. (4) (Same as African American Studies M159P and Anthropology M144P) Lecture, three hours. Examination of race, socially constructed category, from anthropological perspec- tive. Consideration of development of racial catego- ries over time and in different regions, racial passing, and racism in U.S. and other cultural contexts. P/NP or letter grading.


171A. Critical Issues in U.S.-China Relations. (4) Lecture, three hours. Not open to freshmen. Critical examination of U.S. involvement in China, Hong Kong, and Taiwan, including study of historical, cultural, political, and socioeconomic factors that shape relations between China, Hong Kong, and Taiwan and U.S. Examination of impact of relationships in Pacific Rim and Chinese Americans and their communities. P/NP or letter grading.

171B. Critical Issues in U.S.-Japan Relations. (4) Lecture, three hours. Not open to freshmen. Critical examination of U.S. involvement in Japan, including study of historical, cultural, political, and sociocoe-
174C. Transnational Bollywood. (4) (Same as Communication M137.) Lecture, three hours. Study of how popular Bollywood cinema materializes colonial and postcolonial formations pertaining to gender, class and caste, sexuality, race, and economic liberalization in South Asia, as well as across South Asian communities in North America, U.K., and Africa. Examination of how complex relationships between Bollywood and transnational South Asian diasporas enable us to better understand South Asian American communities. P/NP or letter grading.

M173. Topics in Vietnamese Cinema and/or Literature. (4) (Same as Vietnamese M155.) Lecture, three hours. Study of how popular Vietnamese cinema materializes colonial and postcolonial formations pertaining to religion, class, and gender, sexuality, race, and economic liberalization in South Vietnam, as well as across South Vietnamese communities in North America, U.K., and Africa. Examination of how complex relationships between Vietnamese and transnational South Asian diasporas enable us to better understand South Vietnamese American communities. P/NP or letter grading.

174A. Special Courses in Comparative Race, Ethnicity, Gender, and Sexuality. (4) (Formerly numbered 187E.) Lecture, three hours; discussion, one hour (when scheduled). Limited to juniors/seniors. Variable topics in selected comparative and international issues pertaining to race, ethnicity, gender, and sexuality. May be repeated for credit with topic change. P/NP or letter grading.

174B. Special Courses in Transnationalism and Diasporas. (4) (Formerly numbered 187E.) Lecture, three hours; discussion, one hour (when scheduled). Limited to juniors/seniors. Variable topics in selected comparative and international issues pertaining to transnationalism and diasporas. May be repeated for credit with topic change. P/NP or letter grading.

175A. Topics in Comparative Race, Ethnicity, Gender, and Sexuality. (4) (Formerly numbered 191D.) Seminar, three to four hours. Limited to juniors/seniors. Variable topics in selected comparative and international issues pertaining to race, ethnicity, gender, and sexuality from comparative perspectives. May be repeated for credit with topic change. P/NP or letter grading.

175B. Topics in Transnationalism and Diasporas. (4) (Formerly numbered 191E.) Seminar, three to four hours. Limited to juniors/seniors. Variable topics in selected comparative and international issues pertaining to transnationalism and diasporas. May be repeated for credit with topic change. P/NP or letter grading.

185. Capstone Community-Based Research. (4) Seminar, one hour; fieldwork, three hours. Limited to senior departmental majors and minors. Designers, who serve as research team, are matched with one or more institutions or community groups, and must complete minimum of 40 fieldwork hours. Duties and responsibilities collaboratively determined by instructor, students, and sponsoring organizations. May be taken in consultation with instructor. Letter grading.

186. Capstone Research Seminar. (4) (Formerly numbered 187.) Seminar, three hours. Limited to seniors. Selected topics in selected issues in race, gender, and other social, cultural, and economic issues. May be repeated for credit with topic change. P/NP or letter grading.

187A. Special Courses in Research Methodologies. (4) Lecture, three hours; discussion, one hour (when scheduled). Limited to juniors/seniors. Variable topics in selected research methodologies in Asian American studies. May be repeated for credit with topic change. P/NP or letter grading.

187B. Special Courses in Asian American Themes. (4) Lecture, three hours; discussion, one hour (when scheduled). Limited to juniors/seniors. Variable topics in selected Asian American themes. May be repeated for credit with topic change. P/NP or letter grading.

191A. Topics in Research Methodologies. (4) Seminar, three to four hours. Limited to juniors/seniors. Directed reading of scholarly works in historical and contemporary issues pertaining to different Asian-origin subgroups and their respective communities. May be repeated for credit with topic change. P/NP or letter grading.

191F. Topics in Asian American Literature. (5) (Same as English M191C.) Seminar, three or four hours. Enforced requisite: English Composition 3 or 3S. Variable topics in selected issues in Asian American literature. Topics may include genres (auto-biography, novel, poetry, short fiction, or drama); specific nationalities within Asian American community; themes of transnationalism, diaspora, cultural, inter-disciplinary, or international negotiation; and gender and queer politics. May be repeated for credit with topic change. P/NP or letter grading.

192. Undergraduate Practicum in Asian American Studies. (2 or 4) Seminar, two or four hours. Limited to juniors/seniors. Training and supervised practicum for advanced undergraduate students in Asian American studies courses. Students assist in preparation of materials and development of innovative programs with guidance of faculty members. May not be applied toward departmental major or minor requirements. May be repeated for credit. P/NP or letter grading.

195. Community or Corporate Internships in Asian American Studies. (4) Seminar, three to four hours. Limited to juniors/seniors. Community or corporate internship in major and minor required. May be repeated for maximum of 8 units. Individual contract required. P/NP or letter grading.

197. Individual Studies in Asian American Studies. (2 to 4) Tutorial, one to three hours. Directed study with supervising faculty member required. P/NP or letter grading.

198A. Honors Research in Asian American Studies. (4) Individual, three to four hours. Directed reading of scholarly work or supervised research between student and faculty member. May be repeated for maximum of 8 units. Individual contract required. P/NP or letter grading.

198B. Capstone Research in Asian American Studies. (4) Individual, three to four hours. Directed study with supervising faculty member required. P/NP or letter grading.
Graduate Courses

199B-198C. Honors Research in Asian American Studies, (4-4) Tutorial, three hours. Requisite: course 198A. Course 198B is requisite to 198C. Development and completion of honors thesis or comprehensive research project under direct supervision of faculty member, with consent. Individual contract required. In Progress (198B) and letter (198C) grading.

199. Directed Research or Senior Project in Asian American Studies, (3-3) Tutorial, three hours. Preparation: 3.0 overall grade-point average, Requisites: courses 10 (or 10W) and 20 or comparable knowledge in Asian American studies. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culuminating research paper or project report required. May be repeated for maximum of 8 units. Individual contract required. P/NP or letter grading.

Graduate Courses


200B. Critical Issues in Asian American Communities. (4) Seminar, three hours. Designed for graduate students. Evaluation of traditional and contemporary theories and models of community for their appropriateness to understanding Asian American communities. Consideration of specific topics that explicate development, structure, and dynamics of Asian American communities in studying community issues and concerns. S/U or letter grading.


200D. Asian American Literature and Culture. (4) Seminar, three hours. Examination of questions arising from Asian American literary and cultural criticism from mid-1980s to present, with focus on assumptions, possibilities, and limitations of certain theoretical perspectives and positions that have become important in Asian American critical practice. S/U or letter grading.

203. Asian American Research Methods. (4) Seminar, three hours. Introduction to empirical research methods, stressing uses and relevance in research with ethnic minority populations. Review of characteristics of research and applicability of scientific and scholarly inquiry in advancing knowledge. S/U or letter grading.


215A-215B. Asian American Jurisprudence. (215A: 3 or 4/215B: 1 or 2) (Formerly numbered M215A.) Lecture, three hours. Course 215A is enforced requisite to 215B. Designed for graduate students. Through judicial opinions, commentary, and historical readings, examination of how American law has shaped the experiences, and possibilities of Asian Americans and also how they shaped American law as well. Concurrently scheduled with Law 315. In Progress (215A) and S/U or letter (215B) grading.

222. Colonialism and Law in Pacific. (4) Seminar, three hours. Reading seminar on broad topics of colonialism and law. Survey of anthropological, historical, and legal studies of ways in which colonialism and law operate as methods of social control, order, and surveillance in Asia and Pacific. S/U or letter grading.


M239. Race, Ethnicity, and Culture as Concepts in Practice and Research. (4) (Same as Community Health Sciences M239) Seminar, three hours. Integration of cross-cultural findings in healthcare with current American (U.S.) healthcare system paradigms to facilitate designing culturally based public health programs and train culturally competent practitioners. Letter grading.

C242A. Ethnocommunications I: Introduction to Creating Community Media. (4) Seminar, three hours. Strong verbal communication skills and familiarity with technology required. Introduction to social documentary theory and methodology. Through hands-on production, use of digital video to tell visual stories, reclaim history, and examine social issues related to diverse peoples, cultures, and communities. Viewing of films and interactive media for critique and discussion, guest speakers, basic instruction in use of digital video, and terminology and group and individual video projects. Concurrently scheduled with course C142A. S/U or letter grading.

C242B. Ethnocommunications II: Intermediate Creating Community Media. (4) Seminar, three hours. Strong verbal communication skills and familiarity with technology required. Intermediate application of social documentary theory and methodology. Use of digital video to create new approaches to visual storytelling, reclaim history, and examine social issues related to diverse peoples, cultures, and communities. Continuing instruction in use of digital technology and concepts. Topics include videography, composition, sound recording, interviewing techniques, editing, and writing treatments. Completion of community-based documentary required. Concurrently scheduled with course C142B. S/U or letter grading.


M250. Topics in Asian American Literature. (4) (Same as English M260A) Seminar, three hours. Graduate seminar that examines and critically evaluates writings of Asian Americans. May be repeated for credit. S/U or letter grading.


M297A-297Z. Topics in Asian American Studies. (4) Seminar, three hours. Emphasis on Asia as main regional source for international migrants. Topics include patterns and theories of international migration and their relevance to Asian experience, sending and receiving country perspectives, research and policy issues. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, three hours. Preparation: apprentice personnel appointment as teaching assistant in Asian American studies. Designed for graduate students. Required of all new teaching assistants. Special course for teaching assistants designed to deal with problems and techniques for teaching introductory Asian American studies courses. Unit credit may be applied toward full-time equivalence but not toward course requirements for MA S/U grading.

490. Writing Workshop for Graduate Students. (2, 3 or 4) Tutorial, one hour; discussion, one hour. Practice in writing reports, grant proposals, abstracts, theses, and article-length research papers. Analyzing rhetorical and stylistic features of essays in various Asian American journals helps students improve both their prose style and editorial abilities. Four units may be applied toward MA degree requirements. May be repeated once for credit. S/U grading.

495. Supervised Teaching of Asian American Studies. (4) Seminar, three hours. Preparation: apprentice personnel appointment as teaching assistant in Asian American studies. Designed for graduate students. Required of all new teaching assistants. Special course for teaching assistants designed to deal with problems and techniques for teaching introductory Asian American studies courses. Unit credit may be applied toward full-time equivalence but not toward course requirements for MA S/U grading.

598. Research for and Preparation of MA Thesis. (2 to 8) Tutorial, three hours. Limited to graduate students. Preparation and research for MA capstone. May be repeated for credit. S/U grading.

Asian Languages and Cultures / 171

Undergraduate majors who wish to pursue graduate degrees are encouraged to apply for admission to the honors program.

At the graduate level, the department offers highly selective PhD degree programs that train research scholars for academic careers in various fields of Asian culture, including literature, linguistics, film, religion, and history.

Courses for Nonmajors

The department offers many courses in which knowledge of Asian languages is not required. A current list is available on the Registrar's course descriptions web page.

Undergraduate Study

The department offers one major in the study of Asian languages and linguistics—BA in Asian Languages and Linguistics, two majors in the study of Asian cultures—BA in Asian Humanities and BA in Asian Religions, and three majors in Asian literatures and cultures—BA in Chinese, BA in Japanese, and BA in Korean. Each course in the majors must be taken for a letter grade.

The department also offers two minors—Asian Humanities minor and Asian Languages minor. Each course in the minors must be taken for a letter grade.

Students considering a major or minor in the department should consult with the departmental undergraduate adviser as soon as possible in their university career, but in no case later than the point at which they are about to begin taking upper-division courses. Students should select courses to fulfill major or minor requirements in consultation with the undergraduate adviser. The approved list of courses for each category of major or minor requirement is available in the department office (290 Royce Hall) and on its website.

At least 24 upper-division units required for the majors must be completed successfully while in residence at UCLA.

Placement in Language Courses

Students are not placed in Chinese, Japanese, and Korean language courses automatically according to their years of previous study. Students with any prior knowledge or study of an Asian language who wish to take courses in that language at UCLA are required to take the appropriate departmental language placement examination (see the Schedule of Classes or department website for more information). The examination determines which course is most appropriate for the student's current level of proficiency. Students who have obtained college credit for Asian language courses may not repeat those same courses for credit. Prospective majors who place out of the upper-division modern language requirement are expected to substitute an equivalent number of other units to be selected in consultation with the departmental undergraduate adviser.

Language Acquisition Courses

No credit is allowed for completing a less advanced course after successful completion of a more advanced Asian language course with focus on conversation, grammar, and/or composition.

Asian Humanities BA

Preparation for the Major

Required: Completion of the intermediate sequence in one Asian language offered by the department (e.g., Chinese 6, 10, Filipino 6, Hindi-Urdu 100C, Indonesian 6, Japanese 6, 10, Korean 6, 10, Thai 6, Vietnamese 6, or equivalent) and Asian 30 or one civilization course (e.g., Chinese 50, Japanese 50, 70, Korean 50) or one introduction to religions course (e.g., Asian M60, M60W, M61, Chinese M60, M60W, Korean M60, South Asian M60, Southeast Asian M60) within the department.

Transfer Students

Transfer applicants to the Asian Humanities major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of Chinese, Japanese, Korean, Filipino/Tagalog, Hindi, Indonesian, Thai, or Vietnamese and either one civilization course on Asia or one introduction to Buddhism course or one introduction to Asian religions course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Three upper-division language courses in one Asian language offered by the department and eight upper-division electives within the department, including at least one course from at least four of the following areas: China, Japan, Korea, South Asia, or Southeast Asia.

Asian Languages and Linguistics BA

Preparation for the Major

Required: Completion of the intermediate sequence in one Asian language offered by the department (e.g., Chinese 6, 10, Filipino 6, Hindi-Urdu 100C, Indonesian 6, 10, Korean 6, 10, Thai 6, Vietnamese 6, or equivalent) and Asian 30 or one civilization course (e.g., Chinese 50, Japanese 50, 70, Korean 50, Southeast Asian 70) or one introduction to religions course (e.g., Asian M60, M60W, M61, Chinese M60, M60W, Korean M60, South Asian M60, Southeast Asian M60) within the department; and Linguistics 20.

Transfer Students

Transfer applicants to the Asian Languages and Linguistics major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of Chinese, Japanese, Korean, Filipino/Tagalog, Hindi, Indonesian, Thai, or Vietnamese and either one Asian languages and culture course or one civilization course on Asia or one introduction to Buddhism course or one introduction to Asian religions course or one introduction to linguistic analysis course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.
The Major

Required: Eleven courses as follows: (1) five upper-division language courses in one Asian language offered by the department, or three upper-division language courses in one Asian language offered by the department and two upper-division language courses in a different Asian language offered by the department, (2) Asian 100 and 104, (3) two Asian linguistics courses selected from Asian CM124, Chinese 103, C120, Japanese M120, CM122, CM123, CM127, and (4) two upper-division electives within the department or from the Linguistics Department.

Asian Religions BA

Preparation for the Major

Required: Completion of the intermediate sequence in one Asian language offered by the department (e.g., Chinese 6, 10, Filipino 6, Hindi-Urdu 100C, Indonesian 6, Japanese 6, 10, Korean 6, 10, Thai 6, Vietnamese 6, or equivalent) and Asian 30 or one introduction to religions course from Asian M60, M60W, M61, Chinese M60, M60W, Korean M60, South Asian M60, or Southeast Asian M60.

Transfer Students

Transfer applicants to the Asian Religions major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of Chinese, Japanese, Korean, Filipino/Tagalog, Hindi, Indonesian, Thai, or Vietnamese, or one year of Sanskrit, and one introduction to Buddhism course or one introduction to Asian religions course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Three upper-division language courses in one Asian language offered by the department; six upper-division Asian religions courses within the department, including at least one course each concerning religions in China, Japan, Korea, and either South Asia or Southeast Asia; and two electives within the department.

Chinese BA

Preparation for the Major

Required: Chinese 6 or 6A or 10 or equivalent, and one course from 50, M60, M60W, 70, 70W, or Asian 30.

Transfer Students

Transfer applicants to the Chinese major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of Chinese and one Chinese civilization course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Eleven courses as follows: (1) five language courses selected from either modern Chinese (Chinese 100A and 100B and 100C or 100I, 101A, 101B, 102A, C107A, C120, 130A or 130B, 135) or from premodern Chinese (110A, 110B, 110C, 140A through 140D, 165)—at least two language courses must be in the premodern language or texts, (2) one literature course selected from 130A, 130B, 135, 140A through 140D, C150A, C150B, 151, 152, or M153, (3) three elective courses on China selected from C138, 139, 154, 155, C156, CM160, 165, 174, C175, 176, 180, 184, 185, 186, 187, 191A, 191B, 194 or from items 1 and 2 above not used to fulfill another requirement, and (4) two additional upper-division elective courses within the department but outside China.

Japanese BA

Preparation for the Major

Required: Japanese 6 or 10 or equivalent, and 50 or 70 or Asian 30.

Transfer Students

Transfer applicants to the Japanese major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of Japanese and one Japanese civilization or images of Japan course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Eleven courses as follows: (1) five language courses in modern or premodern language or texts selected from Japanese 100A and 100B and 100C or 100S, 100R, 101A and 101B and 101C or 101S, 103A, 103B, 104, 105A, 105B, 110A, 110B, M120, CM123, 130A, 130B, 140A, 140B, 140C, C149, 165, C180, (2) one literature course selected from C150, 151, 154, M156, 157, C159, 170, 172, 174, or 191A, (3) three elective courses on Japan selected from C112, CM122, CM123, CM127, 155, CM160, 161, 165, C171, 175, C182, 191B, 191C, or from items 1 and 2 above not used to fulfill another requirement, and (4) two additional upper-division elective courses within the department but outside Japan.

Korean BA

Preparation for the Major

Required: Korean 6 or 6A or 10 or equivalent, and 50 or M60 or Asian 30.

Transfer Students

Transfer applicants to the Korean major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of Korean and one Korean civilization course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Eleven courses as follows: (1) five language courses selected from Korean 100A, 100B, 100C, 101A and 101B and 101C or 101I, 102A, 102B, 102C, 103A, 103B, 103C, 104A, 104B, 104C, C105A, C105B, C105C, 106A, 106B, 106C, 107A, 107B, 107C, CM120, 165, 176, 178, (2) one literature course selected from 130A, 130B, 150, or C151, (3) three elective courses on Korea selected from CM127, C149, 154, 155, CM160, 165, 172, 175, 177, 180A, 180B, 180C, 181, 182, 183, 184A, 184B, 185, M186, 187, 191A, 191B, or from items 1 and 2 above not used to fulfill another requirement, and (4) two additional upper-division elective courses within the department but outside Korea.

Study Abroad

Early acquisition of Asian language skills aids in the timely completion of major requirements and enriches appreciation of Asian cultures. Students are encouraged, therefore, to complete up to a year of language study in approved programs of study abroad.

Honors Program

Admission

The honors program is open to departmental majors with a 3.5 grade-point average in upper-division courses in the major and a 3.0 overall GPA. Students should apply for admission by spring quarter of their junior year and, at the time of admission, must have completed at least two upper-division courses in their major. For application forms and further information, contact the departmental undergraduate adviser.

Requirements

The honors program is a three-term sequence (Asian 198A-198B-198C), taken in addition to requirements for the major, that culminates in the submission of a 40- to 60-page thesis. In most circumstances courses 198A-198B-198C are taken in the senior year (fall, winter, and spring quarters), although students also have the option of taking course 198A in spring quarter of their junior year. Students are expected to use an Asian language in their research, with the scope of language work to be determined in consultation with their faculty adviser. Highest honors, honors, or no honors are awarded as determined by the faculty thesis director and the departmental honors committee.

To qualify for graduation with departmental honors, students must (1) complete all requirements for the major, (2) have a cumulative grade-point average of 3.5 or better in upper-division courses required for the major and an overall GPA of 3.0 or better, and (3) complete Asian 198A-198B-198C.

To qualify for graduation with departmental highest honors, students must (1) complete all requirements for the major, (2) have a cumulative grade-point average of 3.8 or better in upper-division courses required for the major and an overall GPA of 3.5 or better, and (3) complete Asian 198A-198B-198C with a grade of A in each course.
Asian Humanities Minor

The Asian Humanities minor is designed to recognize a serious commitment to the study of Asian cultures. Lower-division survey courses in civilizations and religious traditions provide students with a solid foundation in the diverse cultural heritages of Asia. Students may fulfill upper-division requirements from a wide variety of courses in all aspects and historical periods of Asian humanities.

Required Lower-Division Courses (10 units):
- Two courses from Asian 30, M60, M60W, M61, Chinese 50, M60, M60W, Japanese 50, 70, Korean 50, M60, South Asian M60, Southeast Asian M60.

Required Upper-Division Courses (20 units):
- Five courses in the department concerning Asian culture (e.g., film, folklore, history, linguistics, literature, mythology, religious studies).

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor, and at least 16 units must be taken in residence at UCLA.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Asian Languages Minor

The Asian Languages minor is designed to recognize a serious commitment to the study of Asian languages. It is especially suited for students who wish to augment their major program in the College of Letters and Science with mastery of an Asian language. The lower-division survey course in civilization or religious tradition provides students with an essential introduction to the diverse cultural heritages of Asia. In the upper-division languages courses, students gain advanced skills in speaking, aural comprehension, reading, and writing an Asian language.

To enter the minor, students must have an overall grade-point average of 2.0 or better, have completed 45 units at UCLA and all lower-division requirements for the minor, and consult with the departmental undergraduate adviser.

Required Lower-Division Courses (10 units):
- Completion of the intermediate sequence in one Asian language offered by the department (e.g., Chinese 6, 10, Filipino 6, Hindi-Urdu 100C, Indonesian 6, Japanese 6, 10, Korean 6, 10, Thai 6, Vietnamese 6, or equivalent) and Asian 30 or one civilization course (e.g., Chinese 50, Japanese 50, 70, Korean 50) or one introduction to religions course (e.g., Asian M60, M60W, M61, Chinese M60, M60W, Korean M60, South Asian M60, Southeast Asian M60) within the department.

Required Upper-Division Courses (20 units):
- Three language courses in one Asian language offered by the department and two electives within the department.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor, and at least 16 units must be taken in residence at UCLA.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Asian Languages and Cultures offers Master of Arts (MA), Candidate in Philosophy (CPHill), and Doctor of Philosophy (PhD) degrees in Asian Languages and Cultures and a Master of Arts (MA) degree in Teaching Asian Languages.

Asian Lower-Division Courses

M20. Visible Language: Study of Writing. (5) (Same as Indo-European Studies M20, Near Eastern Languages M20, Slavic M20, and Southeast Asian M20.) Lecture, three hours; discussion, one hour. Consideration of concrete means of language representation in writing systems. Earliest representations of language known are those of Near East dating to end of 4th millennium B.C. While literate civilizations of Egypt, Indus Valley, China, and Mesoamerica left little evidence of complex systems of writing or textual development, their antiquity and, in case of China and Mesoamerica, their evident isolation mark these centers as loci of independent development in writing. Basic characteristics of early systems of writing, most notably written alphabets, are considered. Classification of world writing systems, and presentation of conceptual basis of semiotic language representation. Origins and development of early non-Western writing systems. How Greco-Roman alphabet arose in 1st millennium B.C. and how it compares to other modern writing systems. P/NP or letter grading.

30. Languages and Cultures of Asia. (5) (Formerly numbered 120.) Lecture, three hours; discussion, one hour. Comparative perspective on Asian languages, with emphasis on three major East Asian languages—Chinese, Japanese, and Korean—to show what they share and how they differ in terms of linguistic features, historical development, and language settings in which these three languages are used. P/NP or letter grading.

M60. Introduction to Buddhism. (5) (Same as Religion M60.) Lecture, three hours; discussion, one hour. For students desiring credit to students with credit for course M60. Knowledge of Asian languages not required. General survey of development of Buddhism, those religious doctrines and meditative practices most essential to various Asian traditions of Buddhism. Letter grading.

M60W. Introduction to Buddhism. (5) (Same as Religion M60W.) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course M60. Knowledge of Asian languages not required. General survey of Buddhist worldview and lifestyle, with focus on those religious doctrines and meditative practices most essential to various Asian traditions of Buddhism. Particular attention paid to those religious doctrines and meditative practices most essential to various Asian traditions of Buddhism. Letter grading.

M61. Introduction to Zen Buddhism. (5) (Same as Religion M61.) Lecture, three hours; discussion, one hour. Knowledge of Asian languages not required. Introduction to Zen traditions and to interplay between Zen and other fundamental cultural and religious conceptions in East Asia. Topics include Zen within Buddhist thought and practice, artistic and literary arts, society, and daily life. Letter grading.

70A-70B-70C. Popular Culture in East Asia. (5-5-5) Lecture, three hours; discussion, one hour. Popular culture in China, Japan, Korea, Vietnam. Topics include popular religion, language, literature, arts, material culture, cinema, and music. Themes include identities, gender, sexuality, and class relations. Letter grading. 70A, 17th through 19th Centuries. 70B, 1895 to 1945. 70C. From 1945.

Upper-Division Courses

100. Methods in Asian Linguistics. (4) Lecture, three hours; discussion, one hour. Research methodologies for dealing with Asian languages, with emphases on bibliographical, data, and professional resources, issues in analyzing and presenting language examples, explaining language phenomena beyond what is observed, cross-cultural comparisons, oral presentation skills, and writing reports in organized ways. P/NP or letter grading.


120FL. Readings in East Asian Languages. (2) Seminar, two hours. Requisite: Chinese 6 or 6A or 6C or Japanese 6 or Korean 6 or 6A. Recommended corequisite: course 120. Additional focus in major East Asian languages to enrich and augment work assigned in course 120, including reading, writing, and other exercises in Chinese, Japanese, and Korean. P/NP or letter grading.

121. Field Methods in Asian Languages and Cultures. (3) Lecture, three hours. Recommended preparation: at least one year of one Asian language. Examination and application of methodologies to better understand language and culture acquisition by working directly with native speaker of Asian language and/or through available materials. One language per term to be selected from languages spoken in Southeast Asia, South Asia, and East Asia. May be repeated for credit. P/NP or letter grading.

CM124. Teaching and Learning of Heritage Languages. (4) (Same as Near Eastern Languages CM114 and Slavic CM114.) Lecture, three hours. Consideration of issues relevant to heritage language learners (HLL) and to heritage language (HL) instruction. Readings and discussion on such topics as definitions of HLL and HLLs; linguistic, demographic, socio-cultural, and sociocultural profile of HLLs, particularly HLL groups most represented among UCLA students; institutional and instructor attitudes toward HLL; interdependence of language acquisition and expectations on HL curriculum and teaching approaches; similarities and differences between HLLs and foreign language learners (FLLs) regarding teaching methods and materials; diagnostic testing and needs analysis; use of oral/aural proficiency as a standard for literacy instruction; optimization of instruction of mixed HL and FL classes. Action research component included. Concurrently scheduled with course CM224. P/NP or letter grading.

151. Buddhist Literature in Translation. (4) Lecture, three hours. Recommended preparation: prior course on Buddhism or traditional Asian religions. Knowledge of Asian languages not required. Readings from a variety of Buddhist literature of Indic and non-Indic origin, with emphasis on key Buddhist themes and critical issues in cross-cultural interpretations of Asian religious texts. Letter grading.

152. Tibetan Buddhism. (4) Lecture, three hours. Knowledge of Asian languages not required. Survey of thought and practices of Buddhism in Tibet from its beginnings to present. Letter grading.

155. Buddhism, Film, and Media. (4) Lecture, three hours; discussion, one hour (when scheduled). Recommended requisite: course M60A or M60W (or Religion M60W). Examination of issues related to Buddhism in globalizing world, with focus on changing and diverse presentations of Buddhism in film. Letter grading.

161. Topics in Asian Religions. (4) Lecture, three hours; discussion, one hour. Knowledge of Asian languages not required. In-depth examination of selected topics of religious traditions that have shaped Asia. Topics vary, but may include death, gender, and state and religion. May be repeated for credit with topic change. Letter grading.

162. Meditation Traditions. (4) Lecture, three hours; discussion, one hour. Knowledge of Asian languages not required. Survey of theory and practice of meditation in Buddhism, with emphasis on Theravada and Zen schools. Topics include various typologies of meditation, symbiotic relationship between meditation and soteriology, and processes by which doctrinal innovation prompts changes in meditative praxis. Letter grading.

163. Buddhism across Boundaries. (4) Lecture, two hours; discussion, one hour. Recommended preparation: prior course on Buddhism or traditional Asian religions. Knowledge of Asian languages not required. Investigation of various themes in development of Buddhist traditions across historical periods as well as national and cultural boundaries, including issues of praxis, politics, and translation. Letter grading.


C170. Approaches to Study of Religion. (4) Seminar, three hours. Investigation of many ways in which religions and religions may be studied, including anthropological, sociological, psychological, phenomenological, political, reductionist, and other approaches. Readings of primary and secondary sources of modern scholarship. Concurrently scheduled with course C270. Letter grading.

190. Research Colloquia in Asian Languages and Cultures. (1) Seminar, one hour. Corequisite: course 198A or 198B or 198C or 199. Designed to bring together advanced undergraduate students to participate in individual supervised tutorial research in seminar setting with one or more faculty members to discuss their own work or related work in discipline. Led by one supervising faculty member. May be repeated for credit. P/NP grading.

191A. Variable Topics Research Seminars: Life Writing in East Asia. (4) Seminar, three hours. Re- search seminars. Readings of biographies and autobiography as elements of East Asian cultural traditions, with focus rotating between China, Japan, and Korea. Readings in English and relevant East Asian languages. Discussion, and development of culminating project. May be repeated for credit. Letter grading.

191B. Variable Topics Research Seminars: Bud dhist Studies. (4) Seminar, three hours. Limited to ju niors/seniors. Research seminar on selected topics in Buddhist studies. Reading, discussion, and develop ment of culminating project. May be repeated for credit. Letter grading.

191H. Honors Research Seminars: Asian Language es and Cultures. (4) Seminar, three hours. Limited to departmental and College honors students. Intro duction to research methods and critical approaches to study of Asia in preparation for writing of senior honors thesis. May be repeated for credit. Letter grading.

193. Speaker Series Seminars: Asian Languages and Cultures. (1-4) Lecture, two hours. Limited to under graduate students. Introduction to latest scholar ship in field of Asian studies. Attendance at selected scholarly presentations required, as well as sessions with seminar three hours. Readings of developed works of speakers. May be repeated for credit. P/NP grading.

195. Community Internships in Asian Languages and Cultures. (4) Tutorial, one hour; fieldwork, eight hours. Limited to junior/senior. Internship in super vised setting in community cultural or organizational setting. Students meet on regular basis with instructor and provide periodic journal reports of their experi ence. Course combines academic research and knowledge gained from community experience required. Individual contract with supervising faculty member required. P/NP or letter grading.

198A-198B. Honors Research Seminars: Asian Lan guages and Cultures. (4-4-4) Tutorial, three hours. Limited to junior/senior departmental majors. May be repeated for credit. Individual contract required. 198A. Preparation: one undergraduate departmental seminar. Development of honors thesis under direct supervision of faculty member. Letter grading. 198B. Enforced requisite: course 198A. Continuation of work initiated in 198A, in tandem with independent re search and relevant progress to supervising faculty member. In Progress grading (credit to be given only on completion of course 198C). 198C. Enforced req uisite: course 198B. Completion of research developed in courses 198A, 198B. Presentation of honors project to supervising faculty member. Letter grading.

199. Directed Research in Asian Languages and Cultures. (2 to 8) Tutorial, to be arranged. Recommended preparation: prior tutorial knowledge of one Asian language. Limited to juniors/seniors. Super vised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated once with consent of instructor. Individual contract required. Letter grading.

Graduate Courses

200. Research Methods in East Asian Linguistics. (4) Lecture, three hours. Research methodologies for East Asian languages, with emphasis on compiling bibliographic data and using professional resources for research. Examination of issues in analyzing lan guage examples, theoretical implications of linguistic data, and applications of functional linguistics in order to explain language phenomena. S/U or letter grading.

201. Proseminar: Approaches to Buddhist Studies. (4) Seminar, three hours. Designed for graduate stu dents in Buddhist studies. Introduction to history of field, bibliography, relations with other disciplines, and current issues and research trends. S/U or letter grading.


203. Variable Topics in East Asian Linguistics. (4) Seminar, three hours. Advanced course that explores topics in East Asian linguistics through critical reading of current research on Asian languages and in-depth analysis of linguistic data. Topics include linguistic structure, communicative language, language and society, and culture, and language change. May be repeated for credit. S/U or letter grading.

204A-204B. Issues and Practices in Teaching Asian Languages. (4-4) Lecture, three hours. Course 204A is enforced requisite to 204B. Critical reading and discussion of major pedagogical issues in teaching Asian languages (chiefly Chinese, Japanese, Korean) as second language, focusing second language acquisition theories and best practices as related to Asian language teaching. In Progress (204A) and S/U or letter (204B) grading.

205. Variable Topics in East Asian Culture and Hist ory of the Three Kingdoms Period in East Asian Cultu re and history, with focus on China, Japan, and Korea. May be repeated for credit with topic change. S/U or letter grading.

210. Proseminar: Cultural and Comparative Stud ies of East Asian Literature. (4) Seminar, three hours. Designed for graduate students. Introduction to theoretical topics relevant to comparative study of East Asian cultures in modern period. Readings include Western theoretical works balanced with texts taken congruent approaches to East Asian topics. S/U or letter grading.


216. Seminar: History and Asia. (4) Seminar, three hours. Designed for graduate students. Readings and discussion of major historiographical trends, with focus on how they have been applied to Asia. Topics include Marxist histories, Annales school and cultural history, microhistories, gender, space, historical memory, postcolonial histories, subaltern, and modernity and Asia. S/U or letter grading.

220A-220B. Seminars: Topics in Cultural Studies. (4-4) Seminar, three hours. Complements course 210. Further investigation of methodology and materials of cultural studies in connection with specific topics selected by instructors. May be repeated for credit. In Progress (220A) and letter (220B) grading.

222A-222B. Corpus Linguistics. (4-4) (Formerly numbered M222A-M222B.) Seminar, three hours. Construction and exploitation of language corpora for studying issues in areas such as lexicology, discourse grammar, language change and variation, language learning, and teaching. Discussion of special issues in project of language corpus. In Progress (222A) and S/U or letter (222B) grading.

CM224. Teaching and Learning of Heritage Lan guages. (4) Same as Near Eastern Languages CM214 and Slavic CM214.) Lecture, three hours. Consideration of issues relevant to heritage language learners (HLL) and to heritage language (HL) instruction. Readings and discussion on such topics as definitions of HLLs and HLLs; linguistic, demographic, socio-cultural, and sociolinguistic, and sociocultural profile of HLLs, particularly HLLs most represented among UCLAS students; institutional and instructor attitudes toward HLL; impact of student methods and critical appraoches on HL curriculum and teaching approaches; similarities and differences between HLLs and foreign language learners (FLLs) regarding teaching methods and materials; diagnostic testing and needs analysis; use of oral/aural proficiency as springboard for literacy instruction; optimization of instruction of mixed HL and FL classes. Action research component included. Concurrently scheduled with course CM124. S/U or letter grading.

230A-230B. Seminars: Theoretical Topics in East Asian Literature. (4-4) Seminar, three hours. Prepara tion; reading knowledge of at least one East Asian language. Concerns of literary theory that are brought to fore by reading of literature from or about East Asia. Readings from both Western and Eastern theorists; issues of translation, comparison, and categorization. In Progress (230A) and letter (230B) grading.
240A–240B. Seminars: Topics in East Asian Literary History. (4–4) Seminar, three hours. Preparation: reading knowledge of at least one East Asian language. Critical issues common to literary historiography in East Asia, including periodization, canon, ideological shifts, and modern approaches to cola, written and oral, etc. In Progress (240A) and letter (240B) grading.


245A–245B. Seminars: Position of Modernity in East Asian Literature. (4–4) Seminar, three hours. Preparation: at least five years of one East Asian language. Designed for graduate students. Course 245A concerned with conceptual architecture and archaeology of modernity, with readings largely from European sources. In-class debate probes relevance of these readings for work as Asians. Focus on Asian writings in course 245B. In Progress (245A) and letter (245B) grading.

255. Topics in Southeast Asian Literature and/or Cinema. (4) Seminar, three hours. Knowledge of one Southeast Asian language recommended but not required. Students are expected to work with a director, who may be drawn from a range of courses offered in Southeast Asia. Students would work with an adviser to design a program of seminars, reading knowledge of one Southeast Asian language, and cultural experience in Southeast Asia. S/U grading.

265–265B. Seminar: Topics in Asian Cinema. (4) Seminar, three hours. Preparation: letter and oral, etc. In Progress (265A) and letter (265B) grading.

270. Approaches to Study of Religion. (4) Seminar, three hours. Investigation of many ways in which religion and religions may be studied, including anthropological, sociological, psychological, phenomenological, political, reductionist, and other approaches. Reading and discussion of classic and contemporary texts. S/U grading.

299. Independent Study. (2 to 6) Tutorial, to be arranged. Designed for graduate students. Guided research and writing of research paper. May be repeated, but only 4 units may be applied toward MA degree. May not be applied toward PhD degree. S/U or letter grading.

301. Teaching East Asian Language as Foreign Language. (4) Lecture, four hours. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, one hour. On-campus placement as teaching assistant, associate, or fellow, teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Teaching Asian Languages at College Level. (4) Seminar, three hours. Preparation: appointment as teaching assistant in East Asian languages and cultures or South and Southeast Asian languages and cultures. Study in team-teaching, teaching methodology, developing course materials, and testing. Participation in peer observations and workshops required. Students will attend one class meeting each week for full-time equivalence but not toward any degree requirements. S/U grading.

496C. Computer Technologies for Teaching College-Level Chinese. (2) Lecture, two hours. Intended for current or potential teaching assistants in Chinese. Introduction to tools and technology designed to enrich classroom learning, help effectively manage student records, and expose students to current computer software and web resources. May not be applied toward degree requirements. S/U grading.

596K. Computer Technologies for Teaching College-Level Chinese. (2) Lecture, two hours. Intended for current or potential teaching assistants in Chinese. Introduction to tools and technology designed to enrich classroom learning, help effectively manage student records, and expose students to current computer software and web resources. May not be applied toward degree requirements. S/U grading.

596J. Computer Technologies for Teaching College-Level Japanese. (4) Lecture, two hours. Intended for current or potential teaching assistants in Japanese. Introduction to tools and technology designed to enrich classroom learning, help effectively manage student records, and expose students to current computer software and web resources. May not be applied toward degree requirements. S/U grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate adviser and graduate dean, and host campus instructor. Department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.


597. Preparation for MA Comprehensive Examination or PhD Qualification. (4 to 8) Tutorial, to be arranged. S/U grading.

598. Research for and Preparation of MA Thesis. (4 to 8) Tutorial, to be arranged. Maximum of 8 units may be applied toward MA degree requirements. S/U grading.


Chinese

Lower-Division Courses

1. Elementary Modern Chinese. (5) Lecture, two hours; discussion, three hours. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Introduction to fundamentals of standard Chinese, including pronunciation, grammar, and Chinese character structure. Emphasis on fundamental basic language skills—speaking, listening comprehension, reading, and writing. P/NP or letter grading.

2A. Elementary Modern Chinese for Advanced Beginners. (5) Lecture, two hours; discussion, three hours. Recommended preparation: To speak and understand Mandarin or other Chinese dialects at elementary levels. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Continuation of course 1. P/NP or letter grading.

2B. Elementary Modern Chinese for Advanced Beginners. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 1 with grade of C or better or Chinese placement test. First-year Chinese. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Continuation of course 1A. P/NP or letter grading.

2C. Elementary Modern Chinese. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 2 with grade of C or better or Chinese placement test. First-year Chinese. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Continuation of course 2. P/NP or letter grading.

3A. Elementary Modern Chinese for Advanced Beginners. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 2A with grade of C or better or Chinese placement test. First-year Chinese. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Continuation of course 2A. P/NP or letter grading.

4. Intermediate Modern Chinese. (5) Lecture, five hours. Enforced requisite: course 3 or 8 with grade of C or better or Chinese placement test. Second-year Chinese. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Designed to strengthen communicative skills of listening, speaking, reading, and writing. Grammar and vocabulary, knowledge of idiomatic expressions, and both traditional and simplified characters. P/NP or letter grading.

4A. Intermediate Modern Chinese for Advanced Students. (5) Lecture, five hours. Enforced requisite: course 3A with grade of C or better or Chinese placement test. Second-year Chinese. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Designed for students who have certain listening and speaking skills in Mandarin or other Chinese dialects at intermediate levels. Training in all four basic language skills (speaking, listening, reading, and writing). P/NP or letter grading.

5. Intermediate Modern Chinese. (5) Lecture, five hours. Enforced requisite: course 4 with grade of C or better or Chinese placement test. Second-year Chinese. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Continuation of course 4. P/NP or letter grading.
5A. Intermediate Modern Chinese for Advanced Students. (5) Lecture, five hours. Enforced requisite: course 4A with grade of C or better or Chinese placement test. Second-year Chinese. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Continuation of course 5A. P/NP or letter grading.


6. Intermediate Modern Chinese. (5) Lecture, five hours. Enforced requisite: course 5 with grade of C or better or Chinese placement test. Second-year Chinese. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Continuation of course 5A. P/NP or letter grading.

6A. Intermediate Modern Chinese for Advanced Students. (5) Lecture, five hours. Enforced requisite: course 5A with grade of C or better or Chinese placement test. Second-year Chinese. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Continuation of course 5A. P/NP or letter grading.

6C. Mandarin for Cantonese Speakers. (5) Lecture, four hours. Enforced requisite: course 5C or Chinese placement test. Recommended for students who are Cantonese speakers and familiar with Chinese characters and who need to improve their pronunciation of standard Mandarin dialect. Completion of course 6C is equivalent to completion of course 5B. P/NP or letter grading.

6D. Mandarin for Chinese Students. (5) Lecture, four hours. Enforced requisite: course 5 or Chinese placement test. Designed for students who are Cantonese speakers and familiar with Chinese characters and who need to improve their pronunciation of standard Mandarin dialect. Completion of course 6D is equivalent to completion of course 5B. P/NP or letter grading.

7A. Elementary Chinese: Intensive. (15) Lecture, ten hours; discussion, ten hours. Enforced requisite: course 6A or 6B with grade of C or better or Chinese placement test. NOT open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Upper-Division Courses

100A-100B-100C. Advanced Modern Chinese. (4-4-4) Lecture, three hours; discussion, two hours. Enforced requisite: course 8 with grade of C or better or Chinese placement test. Course 100A with grade of C or better or Chinese placement test is enforced requisite to 100B; course 100B with grade of C or better or Chinese placement test is enforced requisite to 100C; course 100C with grade of C or better or Chinese placement test is enforced requisite to 100D and 100F. Third-year Chinese. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. P/NP or letter grading.

100D-100E-100F. Advanced Modern Chinese for Heritage Speakers. (4-4-4) Lecture, three hours; discussion, two hours. Enforced requisite: course 8A with grade of C or better or Chinese placement test. Course 100D with grade of C or better or Chinese placement test is enforced requisite to 100E; course 100E with grade of C or better or Chinese placement test is enforced requisite to 100F. Third-year Chinese for heritage speakers. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. P/NP or letter grading.

100G. Mandarin for Chinese Students. (5) Lecture, five hours. Enforced requisite: course 5 or Chinese placement test. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. P/NP or letter grading.

100H. Advanced Modern Chinese: Intensive. (12) Lecture, ten hours; discussion, ten hours. Enforced requisite: course 10 with grade of C or better or Chinese placement test. NOT open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. P/NP or letter grading.

101A-101B. Advanced Readings in Modern Chinese. (4-4) Lecture, two hours; discussion, two hours. Enforced requisite: courses 100A, 100B, and 100C with grade of C or better or Chinese placement test. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. P/NP or letter grading.

102A. Advanced Chinese for International Business. (4) Lecture, two hours; discussion, two hours. Recommended preparation: one to two years of college-level Chinese. Not open to native speakers. Designed to improve student language skills in service of business practice and ground language learning in authentic social cultural settings. P/NP or letter grading.

102L Business Chinese. (6) Lecture, eight hours; discussion, eight hours. Recommended preparation: two years of college-level Chinese. Not open to native speakers. Doing business with China and understanding Chinese economy and business conducts requires that one has advanced level of Chinese language proficiency and deep understanding of Chinese society and culture. Designed to improve student language skills in service of business practice and gain language skills in authentic social cultural settings. Oral and written business communication, social etiquettes in business conduct, Chinese economic and business climate, business law and regulations, resources and environment, and business case studies. Offered in summer only. P/NP or letter grading.

103. Topics in Chinese Language and Culture. (4) Lecture, two hours; discussion, two hours. Recommended preparation: one to two years of college-level Chinese. Chinese language and culture for special purposes. Exploration of interdependent relation between Chinese language and culture. Introduction to basic concepts in sociocultural linguistics, discourse analysis, and technology to analyze Chinese language and cultural conventions expressed through verbal and non-verbal linguistic devices. Major covers modern language use as reflected in various types of media: film, television, Internet, advertisement, etc. May be repeated for credit. P/NP or letter grading.

C107A-C107B. Academic/Professional Chinese. (4-4 or 4-4, 3 hours of lecture, one hour. Enforced requisite: course 101B or Chinese placement test. Intended to improve reading and writing skills in specific academic and professional subject areas for students who have studied general Chinese at advanced level, with coverage in Chinese humanities and social sciences, science and technology, medicine, and applied linguistics. Concurrently scheduled with courses C207A-C207B. P/NP or letter grading.

108FL. Special Studies: Readings in Chinese. (2) Seminar, two hours. Enforced requisite: course 100C or 101B or Chinese placement test. Students must be concurrently enrolled in affiliated main course. Addional work in Chinese to augment work assigned in main course, including reading, writing, and other exercises. May be repeated for credit. P/NP or letter grading.

109. Advanced Tutorial Instruction in Chinese. (2) Tutorial, two hours. Requisite: course 100C or Chinese placement test. Tutorial and guided independent study to help students develop advanced to superior proficiency in oral and written Chinese. May be repeated for credit. P/NP or letter grading.

110A-110B-110C. Introduction to Classical Chinese. (4-4-4) Lecture, three hours; discussion, one hour. Enforced requisite: course 3 or Chinese placement test. Course 110A is enforced requisite to 110B, which is enforced requisite to 110C. Grammar and readings in selected premodern texts. P/NP or letter grading.

C120. Introduction to Chinese Linguistics. (4) Lecture, three hours; discussion, one hour. Recommended preparation: one to two years of college-level Chinese. Introduction to Chinese sound system, written system and its reform, Chinese philosophy and social action. Lecture, two hours; discussion, one hour. Enforced requisite: course 100C or Chinese placement test. Viewig and discussion of classical Chinese films, along with relevant readings in Chinese literature. Letter grading.


139. Gardens in China. (4) Lecture, three hours; discussion, one hour. Recommended preparation: course 50. Interdisciplinary survey of historic and literary gardens in China, with focus on English translations of texts by native writers and recent Western scholars. Letter grading.


140A. Poetry. 140B. Prose. 140C. Fiction. 140D. Philosophical Texts.

C150A. Lyric Traditions. (4) Lecture, three hours; discussion, one hour. Knowledge of Chinese not required. Exploration of poetic traditions of Chinese films of traditional China, with emphasis on development of subjectivity and modes of address. Concurrently scheduled with course C250A. P/NP or letter grading.

C150B. Chinese Literature in Translation: Traditional Narrative and Fiction. (4) Formerly numbered 150B. Lecture, three hours; discussion, one hour. Knowledge of Chinese not required. Examination of formation and development of Chinese narrative traditions from Tang to mid-Qing periods (7th-18th centuries). Readings from biographical writings, fiction, drama, and poetry, with emphasis on different narrative conventions and their cultural assumptions and intersections. Exploration of important issues in context of imperial China, including order and chaos, self and other, desire and transcendence, gender norms and transgression, violence and justice. May be taken independently for credit. Concurrently scheduled with course C250B. Letter grading.


C155. Chinese Immigrant Literature and Film. (4) Same as Asian American Studies M153B and Comparative Literature M171L.) Lecture, three hours; discussion, one hour. Knowledge of Chinese not required. Lectures and reading of representative works from various periods (circa 1000 to 100 B.C.E.), with focus on invenion of Confucian tradition (including Five Classics) and on defenses of that tradition against challenges from Mohists, Taoists, and other groups of thinkers. Concurrently scheduled with course C275. Letter grading.

175SL. Community-Based Introduction to Chinese Thought. (4) Seminar: three hours; fieldwork, two hours. Knowledge of Chinese not required. Community-based survey of Chinese thought as represented in texts of Zhou through early Han periods (circa 1000 to 100 B.C.E.), with focus on invention of Confucian tradition (including Five Classics) and on defenses of that tradition against challenges from Mohists, Taoists, and other groups of thinkers. Service learning component includes research, writing, and work with community partners, such as local schools, in advance by instructor. Letter grading.

176. Neo-Confucianism. (4) Lecture, three hours; discussion, one hour. Knowledge of Chinese not required. Examination of movement to revitalize and reinterpret teachings of Confucius during Tang, Song, Yuan, and Ming dynasties, with consideration of both neo-Confucian philosophy and social action. Letter grading.

180. Chinese Mythology and Supernatural. (4) Lecture, three hours; discussion, one hour. Knowledge of Chinese not required. Survey of corpus of traditional Chinese mythology, with focus on examples prevalent in variety of literary works, including dramatic and fictional works, and evidence from visual arts. Letter grading.
182. Archaeology of Early Global Trade and Piracy. (4) Lecture, three hours; discussion, one hour. Exploration of role of trade and piracy at threshold of globalization (13th to 17th century), with focus on continuity and transformation in Asian trade network in response to new methods of investigation based on archaeological study of porcelain, tracing movement from kilns around Chinese trading ports to shipwrecks and consumer societies in Southeast Asia and colonial America. Important role of ceramic technologies on trans-Pacific voyage, close association of porcelain production and trade with international piracy in traditional historiography presents new angle for understanding dynamics of early global trade and industries.

Letter grading.

M183. Archaeological Landscapes of China. (4) (Same as Anthropology M116R.) Lecture, three hours; discussion, one hour. Scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required; see undergraduate adviser. P/NP or letter grading.

Graduate Courses

200A. Research Methods in Chinese. (4) Seminar, three hours. Requisite: course 110C. Lectures and discussion designed to develop basic skills in using traditional Chinese research methodologies. Topics include classical dictionaries, sinological indices, bibliographical, biographical, and geographical sources; encyclopedias; anthologies; rare editions; illustrated matter and calligraphy. Letter grading.

200B. Proseminar: Premodern Chinese Literature. (4) Seminar, three hours. Introduction to major bibliographical and methodological resources in field of premodern Chinese literature, with focus on research tools in field and on scholarship in English on major literary genres, periods, and authors. Letter grading.

200C. Proseminar: Modern Chinese Literature and Cinema. (4) Seminar, three hours. Introduction to major bibliographical and methodological resources in field of modern Chinese literature. Topics in modern and terms of studies, with focus on theoretical tools, historical knowledge, and critical trends. Letter grading.

M201. China—Seminar: Classical Historiography (and Readings in Historical Culture) (4-4) Seminar, three hours. Preparation: two years of classical Chinese or working knowledge of classical Chinese. Readings in historiography and selected genres of historical documents. Letter grading.

M202. China Studies: Discipline, Methods, Debates. (2) (Same as History M280.) Seminar, two hours. Introduction to study of China as practiced in humanities and social sciences disciplines. S/U grading.


C207A-C207B. Academic/Professional Chinese. (4-4) Lecture, three hours; discussion, one hour. Enforced requisite: course 101B or Chinese placement test. Intended to improve reading and writing skills in specific academic and professional subject areas for students who have studied general Chinese at advanced level, with focus on Chinese humanities and social sciences, science and technology, medicine, and applied linguistics. Concurrently scheduled with courses C107A-C107B. S/U or letter grading.

209. Issues in Sinophone Literature. (4) Seminar, three hours. Exploration of selected topics and issues in Sinophone literature, literature written in Sinitic languages by ethnic minority writers in China, and literature written by those living outside China across world, especially in Malaysia, Taiwan, Singapore, and the U.S. S/U or letter grading.

210. Modern Chinese Literary History. (4) Lecture, three hours. Discussion of major genres, topics, and creative approaches to studying relationship between literature and history. Letter grading.

211A-211B. Seminars: Classical Chinese Poetry. (4-4) Seminar, three hours. Preparation: reading knowledge of literary Chinese, with focus on major textual traditions and chronological periods. Emphasis on philological, critical, and historical approaches. May be repeated for credit with consent of instructor. In Progress (211A) and letter (211B) grading.

212. Topics in Chinese Poetry. (4) Readings/discussion, three hours. Selected readings from classical poetic tradition, with focus on major periods, themes, or other critical issues. May be repeated for credit with consent of instructor. Letter grading.

213A-213B. Chinese-Language Cinemas. (4-4) Seminar, three hours; film-viewing laboratory, two hours. Advanced topics in Chinese-language cinemas. Examination of theory and methodology, historiography, industry and institutions, style and aesthetics, narrative forms and genres, textual and media, other cinematic traditions, and social contexts. May be repeated for credit with consent of instructor. In Progress (213A) and letter (213B) grading.

220A-220B. Theoretical Approaches to Chinese and Sinophone Cultures. (4-4) Seminar, three hours. Discussion to be framed by Western literary and cultural theory, investigating both challenges and limitations. Western theory may be literary and cultural studies. Specific topics vary from year to year. In Progress (220A) and letter (220B) grading.

224A-224B. Seminars: Selected Topics in Chinese Linguistics. (4-4) Seminar, three hours. Critical reading and discussion of selected topics in Chinese functional linguistics (discourse and grammar, corpus linguistics, sociolinguistics, language change). May be repeated for credit with consent of instructor. In Progress (224A) and letter (224B) grading.


230A-230B. Seminars: Selected Topics in Modern Chinese Literature. (4-4) Seminar, three hours. Se- lected readings in 20th-century Chinese literature, emphasizing fiction. Discussion of individual research projects. May be repeated for credit. In Progress (230A) and letter (230B) grading.

238. Travel Writing in Premodern China. (4) Lecture, three hours; discussion, one hour. Recommended preparation: course 50. Exploration of travel writing in China, with focus on English translations of works by native writers and by foreign visitors through centuries. Concurrently scheduled with course C138. Letter grading.

240. Introduction to Chinese Linguistics. (4) Lecture, three hours; discussion, one hour. Recommended preparation: one to two years of college-level Chinese. Introduction to Chinese sound system, writing system and its reform, regional differences, major structural features, language in society and in cultural practices. Concurrently scheduled with course C120. Letter grading.

241A-241B. Heaven, Earth, and Monarchy in Ancient China. (4-4) Seminar, three hours. Preparation: working knowledge of classical Chinese. Close reading of chapters from Han dynasty collection of writings on forms of music, social interaction, education, marriage, and mourning in Zhou royal court, with discussion of topics in recent cultural semiology and anthropology. In Progress (241A) and letter (241B) grading.

242A-242B. Chinese Classics and Exegetical Traditions. (4-4) Seminar, three hours. Recommended preparation: command of literary Chinese. Reading and discussions of selections from one traditional Chinese classic (Confucian Five Classics, others), with introduction to exegetical history, secondary scholarship, and research methodology. Topics vary from year to year. May be repeated for credit. In Progress (242A) and letter (242B) grading.


245A-245B. Seminars: Traditional Chinese Narration and Drama. (4-4) Seminar, three hours. Preparation: working knowledge of classical and literary Chi- nese. Seminar topics alternate yearly between tradi- tional narrative and drama, with emphasis on generic, hermeneutical, and historical approaches. Topics in narrative and drama selected from genres such as Ch’ing periods. Topics in drama selected from liter-
Filipino

Lower-Division Courses

1. Introductory Filipino. (5) Lecture, two hours; discussion, three hours. Coverage of basic Filipino/Tagalog grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/N or letter grading.

2. Introductory Filipino. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 2 with grade of C or better. Coverage of basic Filipino/Tagalog grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/N or letter grading.

3. Intermediate Filipino. (6) Lecture, two hours; discussion, three hours. Enforced requisite: course 3 with grade of C or better. Reinforcement of basic Filipino/Tagalog grammar and coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/N or letter grading.

4. Intermediate Filipino. (6) Lecture, two hours; discussion, three hours. Enforced requisite: course 4 with grade of C or better. Reinforcement of basic Filipino/Tagalog grammar and coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/N or letter grading.

5. Intermediate Filipino. (6) Lecture, two hours; discussion, three hours. Enforced requisite: course 5 with grade of C or better. Reinforcement of basic Filipino/Tagalog grammar and coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/N or letter grading.

6. Intermediate Filipino. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 6 with grade of C or better. Coverage of basic Filipino/Tagalog grammar and coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/N or letter grading.

8. Elementary Filipino: Intensive. (15) Lecture, 10 hours; discussion, 10 hours. Intensive course equivalent to courses 1, 2, and 3. Coverage of basic Filipino/Tagalog grammar, with equal emphasis on reading, writing, and comprehension. Offered in summer only. P/N or letter grading.

Upper-Division Courses

100A. Advanced Filipino: Reading and Writing. (4) Lecture, three hours. Enforced requisite: course 8 with grade of C or better or Filipino/Tagalog placement test. Designed to move students with intermediate level of proficiency toward greater proficiency and fluency in reading, writing, speaking, and listening in Filipino language. Coverage of skills in effective use of language: description, narration, exposition, and argumentation. How to analyze different elements of writing and reading of major themes and genres of contemporary Filipino writing. P/N or letter grading.

109. Advanced Tutorial Instruction in Filipino. (2) Tutorial, two hours. Requisite: course 6 or Filipino/Tagalog placement test. Tutorial and guided independent study to help students develop advanced to superior proficiency in oral and written Filipino. May be repeated for credit. P/N or letter grading.


155. Topics in Filipino Cinema and Literature. (4) Lecture, three hours: discussion, one hour. Knowledge of Filipino not required. Critical analysis of language and culture, history, and sociopolitical issues as represented in Filipino films and/or literature. May be repeated once for credit. P/N or letter grading.

Hindi-Urdu

Lower-Division Courses

1. Introductory Hindi-Urdu. (5) Lecture, two hours; discussion, three hours. Coverage of basic Hindi grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/N or letter grading.

2. Introductory Hindi-Urdu. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 1 with grade of C or better. Coverage of basic Hindi grammar, with equal emphasis on writing and reading. Enforced prerequisite: course 1 or Hindi-Urdu placement test. Tutorial and guided independent study to help students develop advanced to superior proficiency in oral and written Hindi-Urdu. May be repeated for credit. P/N or letter grading.

Upper-Division Courses

100A-100B. Intermediate Hindi-Urdu. (4-4-4) Formerly numbered 4, 5, 6.) Lecture, two hours; discussion, three hours. Enforced requisite: course 3 with grade of C or better. Course 100A with grade of C or better is requisite to 100B; course 100B with grade of C or better is requisite to 100C. Coverage of basic Hindi grammar and coverage of advanced topics. Broadening of skills in conversation and composition. Offered in summer only. P/N or letter grading.
Indonesian

Lower-Division Courses

1. Introductory Indonesian. (5) Lecture, five hours. Enforced requisite: course 1 with grade of C or better. Not open to students who have learned enough Indonesian to qualify for more advanced courses. Designed to develop basic Indonesian grammar, with emphasis on reading, writing, listening, and speaking skills. P/NP or letter grading.

2. Introductory Indonesian. (5) Lecture, five hours. Enforced requisite: course 1 with grade of C or better. Not open to students who have learned enough Indonesian to qualify for more advanced courses. Designed to develop basic Indonesian grammar, with emphasis on reading, writing, listening, and speaking skills. P/NP or letter grading.

3. Introductory Indonesian. (5) Lecture, five hours. Enforced requisite: course 1 with grade of C or better. Not open to students who have learned enough Indonesian to qualify for more advanced courses. Designed to develop basic Indonesian grammar, with emphasis on reading, writing, listening, and speaking skills. P/NP or letter grading.

4. Intermediate Indonesian. (5) Lecture, five hours. Enforced requisite: course 1 with grade of C or better. Not open to students who have learned enough Indonesian to qualify for more advanced courses. Designed to develop basic Indonesian grammar, with emphasis on reading, writing, listening, and speaking skills. P/NP or letter grading.

5. Intermediate Indonesian. (5) Lecture, five hours. Enforced requisite: course 1 with grade of C or better. Not open to students who have learned enough Indonesian to qualify for more advanced courses. Designed to develop basic Indonesian grammar, with emphasis on reading, writing, listening, and speaking skills. P/NP or letter grading.

Upper-Division Courses

100A-100B-100C. Advanced Indonesian. (4-4-4) Lecture, three hours. Course 100A with grade of C or better is requisite to 100B; course 100B with grade of C or better is requisite to 100C. Preparation for more advanced study of specialized academic subjects, including but not limited to social sciences and humanities. Students read authentic materials in Indonesian concerning various issues. P/NP or letter grading.

109. Advanced Tutorial Instruction in Indonesian. (2) Tutorial, two hours; lecture, five hours. Enforced requisite: 60 hours or letter grading.

Japanese

Lower-Division Courses

1. Elementary Modern Japanese. (5) Lecture, two hours; discussion, three hours. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Introduction to modern Japanese with attention to conversational, grammar, and written forms. Conversation drill based on material covered in class. P/NP or letter grading.

2. Elementary Modern Japanese. (5) Lecture, two hours; discussion, three hours. Designed to introduce students to the Japanese language. Enforced requisite: course 1 with grade of C or better or Japanese placement test. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Continuation of course 1. P/NP or letter grading.

3. Elementary Modern Japanese. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 2 with grade of C or better or Japanese placement test. Not open to students who have learned from whatever source, enough Japanese to qualify for more advanced courses. Continuation of course 2. P/NP or letter grading.

4. Intermediate Modern Japanese. (5) Lecture, five hours. Enforced requisite: course 3 or 8 with grade of C or better or Japanese placement test. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Designed to teach the communicative skills of listening, speaking, reading, and writing. Grammar and vocabulary, reading, speaking, and writing. P/NP or letter grading.

5. Intermediate Modern Japanese. (5) Lecture, five hours. Enforced requisite: course 3 or 8 with grade of C or better or Japanese placement test. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Continuation of course 3. P/NP or letter grading.

6. Intermediate Modern Japanese. (5) Lecture, five hours. Enforced requisite: course 3 or 8 with grade of C or better or Japanese placement test. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Continuation of course 3. P/NP or letter grading.

Upper-Division Courses

100A-100B-100C. Advanced Modern Japanese. (4-4-4) Lecture, five hours. Enforced requisite: course 6 or 10 with grade of C or better or Japanese placement test. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Continuation of course 2. P/NP or letter grading.

104. Third-Year Advanced Reading in Modern Japanese. (4) Lecture, three hours. Enforced requisite: course 10A or 10S with grade of C or better. Designed to develop reading skills—reading, understanding, and writing. Offered in summer only. P/NP or letter grading.

105A. First-Year Japanese: Advanced Reading I, II. (4-4) Lecture, three hours; discussion, one hour. Enforced requisite: course 100A or who have learned, from whatever source, enough Japanese to qualify for more advanced courses. May be taken concurrently with course 100A. Development of overall competency in reading advanced-level Japanese materials. Instructed in understanding grammar and practical expressions as well as expansion of kanji and vocabulary to achieve higher ability in comprehension of written materials in Japanese. Translations from Japanese to English, as well as from English to Japanese. P/NP or letter grading.

105B. First-Year Japanese: Advanced Reading I, II. (4-4) Lecture, three hours; discussion, one hour. Enforced requisite: course 100A or who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Intensive course equivalent to courses 100A, 100B, and 100C. Learning Japanese language with emphasis on socio-cultural issues of contemporary Japanese society. Materials selected from contemporary publications, videos, and audiotapes. Reading with focus on linguistic features, writing summaries and opinions, oral activities, and project work. Offered in summer only. P/NP or letter grading.

105A-105B. First-Year Japanese: Advanced Reading I, II. (4-4) Lecture, three hours; discussion, one hour. Enforced requisite: course 100A or 100S with grade of C or better or Japanese placement test. Designed to improve skills in Japanese in context of business transactions. To be successful business person, one must be equipped with ad-
advanced specialized oral and written communication skills as well as high degree of cultural understanding. Oral and written business communication, social eti-quette in business conduct, Japanese economic and business climate, business law and regulations, re-sources and environment, and business case studies. P/NP or letter grading.

105A-105B. Advanced Reading and Writing for Japanese-Heritage Speakers. (4-4) (Formerly numbered 100A-100B) Lecture, three hours; discussion, one hour. Enforced requisite: Japanese Placement test. Not open to students who have taken 100 series. Perfect skill-level, non-Japanese speakers. Enforced requisite: course 100C or 100S or Japanese placement test. May be repeated for credit. \( P/NP \) or letter grading.

105FL. Special Studies: Readings in Japanese. (2) Seminar, two hours. Requisite: course 100C or 100S with grade of \( C \) or better or Japanese placement test. Students must be concurrently enrolled in affiliated main course. Additional work in Japanese to augment work assigned in main course, including reading, writing, and other exercises. May be repeated for credit. \( P/NP \) or letter grading.

109. Advanced Tutorial Instruction in Japanese. (2) Tutorial, two hours. Requisite: course 100C or 100S with grade of \( C \) or better or Japanese placement test. Tutorial and guided independent study to help students develop advanced proficiency in oral and written Japanese. May be repeated for credit. \( P/NP \) or letter grading.


110B. Introduction to Classical Japanese: Reading Proficiency. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 110A. Grammar and readings of selected premodern texts. P/NP or letter grading.


M120. Introduction to Japanese Linguistics. (4) (Same as Linguistics M116.) Lecture, three hours; discussion, one hour. Enforced requisite: course 3 or 4 or Japanese placement test. Introduction to Japanese grammar and sociolinguistics through reading, discussion, and problem solving in phonology, syntax, semantics, and discourse pragmatics. Letter grading.


130A-130B-130C. Readings in Modern Japanese Literature. (4-4-4) Seminar, three hours. Enforced requisite: course 100C or 100S or Japanese placement test. Readings and discussion of works by modern Japanese writers. Each course may be taken independently for credit. Letter grading.


C150. Topics in Japanese Literature and Philoso- phy. (4) Lecture, three hours; discussion, one hour. Knowledge of Japanese not required. Discussion of philosophical topics such as experience, identity, value, technology, in light of Japanese literary texts. Concurrently scheduled with course C250. Letter grading.

151. Japanese Literature in Translation: Modern. (4) Lecture, three hours; discussion, one hour. Requir- e: English Composition 3 or 3H or one course from Comparative Literature 1A, 1B, 1C, 1D. Knowledge of Japanese not required. Survey of Japanese literature from 18th century to post-World War II. P/NP or letter grading.

154. Postwar Japanese Culture and High Literature. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 3 or 3H or one course from Comparative Literature 1A, 1B, 1C, 1D. Knowledge of Japanese not required. Use of fiction and film to ex- plore Japanese culture in postwar era in broad cross-disciplinary and cross-cultural context. P/NP or letter grading.


M156. Literature and Technology. (4) (Same as Comparative Literature M156.) Lecture, three hours. Knowledge of Japanese not required. Examination of representation of technology in 20th-century fiction. Discussion of impact of technology on shifting images of gender, subjectivity, and national identity. P/NP or letter grading.


C159. Variable Topics in Culture and Society in Ja- pan. (4) Lecture, three hours; discussion, one hour. Knowledge of Japanese not required. Examination of relationship between culture (art, literature, film) and society in Japan. Reading, audio and visual material, discussion, and development of culminating project. May be repeated for credit with topic change. Concurrently scheduled with course C259. P/NP or letter grading.


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165. Introduction to Japanese Buddhist Texts. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 110A or Chinese 165 or Japanese placement test. Readings in premodern Buddhist scriptures, Japanese-Buddhist Kambun, and mixed Japanese/Chinese literary styles concerning textual commentaries, doctrinal treatises, hagiographies, temple histories, etc. Coverage varies. May be repeated for credit with consent of instructor. Letter grading.

170. Japanese Tales of Supernatural. (4) Lecture, three hours; discussion, one hour. Knowledge of Jap- anese not required. Readings of fictional works that feature supernatural beings, including Shinto gods, Buddhist, bodhisattvas, Yin-yang diviners, ghosts, various types of demons, shape-shifting foxes and raccoon dogs, snakes, and dragons. Exploration of different treatments of supernatural themes from an- cient to modern times, and of relationship between supernatural literature and expressions of fear, cruelty, violence, misogyny, desire, hope, compassion, and humor. Letter grading.

C171. Topics in Japanese Studies. (4) Lecture, three hours. Enforced requisite: course 100C or Japa- nese placement test. Advanced course that explores Japanese cultural phenomena through in-depth reading of Japa- nese-language texts and/or visual documents. Topics include literature, religion, folklore, cultural history, language, and society. Concurrently scheduled with course C271, P/NP or letter grading.

172. Fiction and Plays of Floating World. (4) Lecture, three hours; discussion, one hour. Enforced requi- site: course 50. Examination of broad selection of popular fiction and theater from late 17th to early 19th century, with focus on theme of floating world ("kyo) of entertainment, including pleasure quarters, theater district, and realm of fiction. Letter grading.


191A. Variable Topics Research Seminars: Classi- cal Japan. (4) Seminar, three hours. Research sem- inar on selected topics in premodern Japanese litera- ture and thought. Reading, discussion, and develop- ment of culminating project. May be repeated for credit. Letter grading.

191B. Variable Topics Research Seminars: Modern Japan. (4) Seminar, three hours. Research seminar on selected topics on modern Japan. Reading, discus- sion, and development of culminating project. May be repeated for credit. Letter grading.
Graduate Courses


201A-201B. Introduction to Reading Japanese Academic Texts. (4-4) Lecture, three hours. Requisite: course 100A or 100R. Course 201A is requisite to 201B. Describes current Japanese literature, focusing on reading modern Japanese-language academic texts, both prewar and postwar, with focus on reading; students who need to improve other skills should take additional courses. Letter grading.


224A-224B. Seminars: Selected Topics in Japanese Discourse Linguistics. (4-4) Seminar, three hours. Required prerequisite: course 222. Critical reading and discussion of selected topics in Japanese discourse linguistics. May be repeated for credit with consent of instructor. In Progress (224A) and letter (224B) grading.

226. Survey of Functional Linguistics. (4) Lecture, four hours. Survey of recent empirical and theoretical research in several areas of functional linguistics, that has served as backbone for development of Japanese discourse linguistics. May be repeated for credit with consent of instructor. S/U or letter grading.


228. Functional Data in Discourse Analysis. (4) Lecture, three hours. Designed to prepare students to conduct research in natural discourse data, both spoken and written, for linguistic analysis. Discussion of discourse taxonomy, data collection methodologies, data organization, analytical frameworks. Letter grading.

231. Nation in Modern Japanese Intellectual Discourse. (4) Lecture, three hours. Enforced requisite: course 100C or 100S or Japanese placement test. Reading of texts in original Japanese, with focus on late Taisho and early Showa periods. Various ways that nation (minzoku) was discussed in intellectual discourse during this period, particularly in relation to politics of imperialism. Concurrently scheduled with course C131. Letter grading.

235A-235B. Seminars: Selected Topics in Modern Japanese Fiction. (4-4) Seminar, three hours. May be repeated for credit. In Progress (235A) and letter (235B) grading.

240A-240B. Seminars: Selected Topics in Japanese Literature. (4-4) Seminar, three hours. May be repeated for credit. In Progress (240A) and letter (240B) grading.

241A-241B. Seminars: Japanese Classics. (4-4) Seminar, three hours. Prose and poetry from early times to 1868. May be repeated for credit with consent of instructor. In Progress (241A) and letter (241B) grading.


245A-245B. Seminars: Medieval Japanese Literature. (4-4) Seminar, three hours. Preparation: one year of classical Japanese. Selected readings in travel poetry, travel diaries, and other genres of Japanese travel literature of Heian, Kamakura, Nambokucho, and Muromachi periods. May be repeated for credit with consent of instructor. In Progress (245A) and letter (245B) grading.


250. Topics in Japanese Literature and Philosophy. (4) Lecture, three hours; discussion, one hour. Knowledge of Japanese not required. Study of philosophical topics such as existence, identity, value, technology, in light of Japanese literary texts. Concurrently scheduled with course C150. Letter grading.

259. Variable Topics in Culture and Society in Japan. (4) Lecture, three hours; discussion, one hour. Examination of relationship between culture (art, literature, film) and society in Japan. Reading, audio and visual exposure, and development of culminating project. May be repeated for credit with topic change. Concurrently scheduled with course C159. S/U or letter grading.


265A-265B. Seminars: Japanese Buddhist Texts. (4-4) Seminar, three hours. May be repeated for credit with consent of instructor. In Progress (265A) and letter (265B) grading.

270A-270B. Seminars: Japanese Ritual Arts. (4-4) Seminar, three hours. Reading knowledge of Japanese not required. Discussions and readings on ritual (performing) arts of Japan comprising music, dance, storytelling, tattooing, poetry, cuisine, decoration, disguise, mimicry, and competitive as well as acrobatic arts, with special emphasis on religio-magical purposes and symbolic structure of these arts. In Progress (270A) and letter (270B) grading.


276. Reading Modern Bodies. (4) (Same as Comparative Literature M276) Seminar, three hours. Desi-ogned for graduate students. Exploration of construction of human body through various modern technologies and discourses, including those of disease, diet, race, gender, and sexuality. Examination of texts from a variety of locales with particular emphasis on Japanese, S/U or letter grading.

282. Japanese Folklife. (4) Lecture, three hours; discussion, one hour. Knowledge of Japanese not required. Lectures/discussions on natural religious rituals (festivals) and objects, and beliefs with special emphasis on artistic behavior. Discussion of Shinto, Shinto/Buddhist syncretism, and other non-Buddhist belief systems. Concurrently scheduled with course C182. Letter grading.


Korean

Lower-Division Courses

1. Elementary Modern Korean. (5) Lecture, two hours; discussion, three hours. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Introduction to standard spoken Korean and Korean writing, with emphasis on conversation. P/NP or letter grading.

2. Elementary Modern Korean. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 1 with grade of C or better or Korean placement test. Designed for students with no Korean-heritage background who want more Korean speaking/listening exposure than available in course 1. Emphasis on spelling, basic grammar, reading, writing, and daily conversation. P/NP or letter grading.

3. Elementary Modern Korean. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 1 with grade of C or better or Korean placement test. Designed for students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Emphasis on conversation. P/NP or letter grading.

4. Elementary Modern Korean. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 1 with grade of C or better or Korean placement test. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Emphasis on conversation. P/NP or letter grading.

5. Elementary Modern Korean. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 1 with grade of C or better or Korean placement test. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Emphasis on conversation. P/NP or letter grading.

50. History of Korean Civilization. (5) Lecture, three hours; discussion, one hour. Knowledge of Korean not required. General survey of development of Korean culture within context of political, social, and economic history. P/NP or letter grading.

M60. Introduction to Korean Religions. (5) (Same as Religion M60C.) Lecture, three hours; discussion, one hour. Knowledge of Asian languages not required. Geographical and historical aspects of Korea—Shamanism, Buddhism, Confucianism, Daoism, Christianity, Tonghak, and some new religions—with focus on religious doctrines, practices, Korean characteristics, and social impacts. P/NP or letter grading.

Upper-Division Courses

100A-100B-100C. Advanced Modern Korean. (4-4-4) Lecture, five hours. Enforced requisite: course 6, 6A, or 10 with grade of C or better or Korean placement test. Completion of course 5 or better or Korean placement test is enforced requisite to 100B; course 100B with grade of C or better or Korean placement test is enforced requisite to 100C. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Designed for students who seek training in written components of standard Korean (spelling, reading, writing, and grammar) at intermediate level. Continuation of course 3. P/NP or letter grading.

5. Intermediate Modern Korean. (5) Lecture, three hours; discussion, two hours. Enforced requisite: course 4 with grade of C or better or Korean placement test. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Designed for students who seek training in written components of standard Korean (spelling, reading, writing, and grammar) at intermediate level. Continuation of course 3. Conversation, composition, and readings with structural analysis in modern Korean. P/NP or letter grading.

4A. Intermediate Korean for Korean Speakers. (5) Lecture, five hours. Enforced requisite: course 3A with grade of C or better or Korean placement test. Not open to students who attended elementary school in Korea for more than one year or who have learned, from whatever source, enough Korean to qualify for more advanced courses. Designed for students who seek training in written components of standard Korean (spelling, reading, writing, and grammar) at intermediate level. Continuation of course 6A. P/NP or letter grading.

5. Intermediate Modern Korean. (5) Lecture, three hours; discussion, two hours. Enforced requisite: course 5 with grade of C or better or Korean placement test. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Conversation, composition, and readings with structural analysis in modern Korean. P/NP or letter grading.

5A. Intermediate Korean for Korean Speakers. (5) Lecture, five hours. Enforced requisite: course 4A with grade of C or better or Korean placement test. Not open to students who attended elementary school in Korea for more than one year or who have learned, from whatever source, enough Korean to qualify for more advanced courses. Designed for Korean-heritage learners. Emphasis on four skills (spelling, grammar, readings, and conversation in modern Korean). Continuation of course 6A. P/NP or letter grading.

6. Intermediate Modern Korean. (5) Lecture, three hours; discussion, two hours. Enforced requisite: course 5 with grade of C or better or Korean placement test. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Conversation, composition, and readings with structural analysis in modern Korean. P/NP or letter grading.

6A. Intermediate Korean for Korean Speakers. (5) Lecture, five hours. Enforced requisite: course 5A with grade of C or better or Korean placement test. Not open to students who attended elementary school in Korea for more than one year or who have learned, from whatever source, enough Korean to qualify for more advanced courses. Designed for Korean-heritage learners. Emphasis on four skills (spelling, grammar, readings, and conversation in modern Korean). Continuation of course 6A. P/NP or letter grading.

8. Elementary Korean: Intensive. (15) Lecture, 10 hours; discussion, 10 hours. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Conversation, composition, and readings with structural analysis in modern Korean. Offered in summer only. P/NP or letter grading.

10. Intermediate Modern Korean: Intensive. (15) Lecture, 10 hours; discussion, 10 hours. Recommended preparation: course 3, 3A, or 8, or Korean placement test, or courses equivalent to elementary-level Korean. Second-year Korean. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Intensive course equivalent to courses 4, 5, and 6. Conversation, composition, and readings with structural analysis in modern Korean. Offered in summer only. P/NP or letter grading.

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CM120. Structure of Korean. (4) (Same as Linguistics M177.) Lecture, three hours; discussion, one hour. Recommended preparation: two years of Korean, or one year of Korean and some knowledge of linguistics. Discussion of major syntactic, semantic, and pragmatic features of Korean in comparison to universalist and nonuniversalist theories, with brief introduction to typological features, and phonological structure of Korean. Concurrently scheduled with course C220. Letter grading.

CM127. Contrastive Analysis of Japanese and Korean. (4) (Same as Japanese CM127 and Linguistics M178.) Lecture, three hours; discussion, one hour. Recommended preparation: two years of Japanese language and knowledge of Hangul, or two years of Korean and knowledge of Hiragana. Prior linguistic background also recommended. Critical reading and discussion of selected works in the fields of philosophy, literature, and linguistics, with discussion of major modern Korean literary texts. Each course may be taken independently for credit. Letter grading.

130A-130B. Readings in Modern Korean Literature. (4-4) Lecture, three hours. Enforced requisites: course 100C or Chinese 110C or Korean placement test. Reading in premodern Koryo and Choson texts on politics, society, and culture. Coverage varies. May be repeated with consent of instructor. P/NP or letter grading.

176. Introduction to Korean Confucian Texts. (4) Lecture, three hours. Enforced requisite: course 101A or Chinese 110A or Korean placement test. Reading in premodern Koryo and Choson texts on politics, society, and culture. Coverage varies. May be repeated with consent of instructor. P/NP or letter grading.

177. Intellectual History of Modern Korea. (4) Lecture, three hours; discussion, one hour. Requisite: course 50. Knowledge of Korean not required. Survey of Korean thought in late 19th and 20th centuries, including political thought, philosophy, law and politics, nationalism, and economic thought and practice. P/NP or letter grading.


180A-180B-180C. History of Korea. (4-4-4) Lecture, three hours; discussion, one hour. Knowledge of Korean not required. Examination of evolution of Korean culture and society within context of political and institutional changes. Coverage varies. May be repeated with consent of instructor. P/NP or letter grading.

181. Reading Korean Cultural Landscape. (4) Lecture, three hours; discussion, one hour. Knowledge of Korean not required. Examination of modernizing reforms adopted in Korea in 1894. Consideration of conflict among radical Westernizers who had studied in Japan and U.S., moderates, reformers who followed Chinese model of adopting Western technology to defend Confucian order, and orthodox Confucians who strongly opposed any changes. Focus on histori- cal and intellectual development of modern Korean history from earliest times through mid-19th century. Coverage varies from term to term and includes such topics as state formation, international relations, or sprouts of capitalism in Korea. Reading, discussion, and development of culminating project. May be repeated for credit. Letter grading.

191A. Variable Topics Research Seminar: Premodern or Early Modern Korean History. (4) Seminar, three hours. Enforced requisites: one or two terms of Korean, and consent of instructor. Variable topics of interpretation in Korean history from earliest times through mid-19th century. Coverage varies from term to term and includes such topics as state forma- tion, international relations, or sprouts of capitalism. Reading, discussion, and development of culminating project. May be repeated for credit. Letter grading.

191B. Variable Topics Research Seminar: Contemporary Korean History. (4) Seminar, three hours. Research seminar on selected topics in modern Korean history. Reading, discussion, and development of culminating project. May be repeated for credit. Letter grading.

197. Individual Studies in Korean. (4) Tutorial, to be arranged. Limited to juniors/seniors and graduate students who desire more advanced or specialized instruction in Korean. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required; see undergraduate adviser. P/NP or letter grading.

Graduate Courses

200. Bibliography and Methods of Research in Korean. (4) Lecture, three hours. Requisites: course 101C, Chinese 110C. Review of basic Western and modern Korean reference books, with concentration on Korean literature and language, and survey of such as form of centralization of bureaucratic sys- tems, rise of aristocratic social order, and propagation of Confucian social values. Letter grading.

184B. Women in History: Modern Korea. (4) Lecture, three hours; discussion, one hour. Knowledge of Korean not required. Examination of modern Korean history from perspective of women since mid-19th century. Consideration of how gender roles and iden- tities were socially (re)constructed over time, with focus on continual negotiation by women and men within larger processes of political, social, and cultural transformations. Discussion of issues such as changes in women’s education, employment, social/ legal status, especially in relation to war, social/democratization, and economic development. P/NP or letter grading.


M186. Korea and Vietnam: Comparative Modern Histories. (4) (Same as Vietnamese M186.) Seminar, three hours. Comparative study of modern Korea and parallel histories of Korea and Vietnam, organized chronologically, but structured around key themes that serve as basis for comparison. Modern experi- ence of internationalized Vietnam, that shares many significant parallels, including imposition of colonial control, transition to modernized societies within con- text of colonialism, and shared experiences of World Wars. Both were also divided after war between communist regimes in north and strongly anticommu- nist regimes in south. Each also experienced warfare after division and direct involvement of U.S., during height of cold war between 1950s and 1970s. P/NP or letter grading.


191A. Variable Topics Research Seminars: Pre- modern or Early Modern Korean History. (4) Seminar, three hours. Enforced requisites: one or two terms of Korean, and consent of instructor. Variable topics of interpretation in Korean history from earliest times through mid-19th century. Coverage varies from term to term and includes such topics as state forma- tion, international relations, or sprouts of capitalism in Korea. Reading, discussion, and development of culminating project. May be repeated for credit. Letter grading.

191B. Variable Topics Research Seminar: Con- temporary Korean History. (4) Seminar, three hours. Research seminar on selected topics in modern Ko- rean history. Reading, discussion, and development of culminating project. May be repeated for credit. Letter grading.
basic bibliographic material. In addition, introduc-
tion to most important primary sources in student’s field of specialization. Letter grading.

203. Variable Topics in Korean Culture. (4) Seminar, three hours. Advanced course that explores Korean culture through in-depth reading of Korean-language texts and other visual and auditory sources. Topics include literature, religion, folklore, cultural language, and society. May be repeated for credit. S/U or letter grading.

C205A-C205B. Reading Korean Academic Texts. (4-4) Lecture, three hours. Requisite: course 101C or Korean placement test. Intended to improve reading skills for students who have studied Korean to advance their world language proficiency. May be taken independently for credit. Concurrently scheduled with courses C105A-C105B. S/U or letter grading.

C205C. Reading Korean Academic Texts. (4) Lecture, three hours. Intended to improve reading skills for students who have studied Korean to advanced level, with coverage in Korean of materials on Korean history, culture, and society. May be taken independently for credit. Concurrently scheduled with course C105C. S/U or letter grading.


211. Thought and Society in Modern Korea. (4) Discussion, three hours. Preparation: reading knowledge of Korean. Designed for graduate students. Critical examination of list of books central to field of modern Korean history, including such topics as Korean capitalism and communism, intellectual history, social movements, and Korean War. Letter grading.

212. 19th-Century Korea. (4) Seminar, three hours; discussion, one hour. Requisite: course 180B or 180C. Proseminar covering crucial period from coronation of Sunjong in 1800 to annexation of Korea by Japan in 1910, including major historical scholarship on political, diplomatic, social, economic, intellectual, and cultural history. Letter grading.


220. Structure of Korean. (4) Lecture, three hours; discussion, two hours. Recommended preparation: two years of Korean, or one year of Korean and some knowledge of linguistics. Discussion of major syntactic, semantic, and pragmatic characteristics of Korean in light of linguistic universals, with brief introduction to formation, typological features, and phonological structure of Korean. Concurrently scheduled with course CM120. Letter grading.

224A-224B. Seminars: Selected Topics in Korean Linguistics. (4-4) Seminar, three hours. Critical reading and discussion of selected topics in Korean functional linguistics (grammaticalization, discourse, pragmatics, sociolinguistics, syntax, morphology) and pedagogy. In Progress (224A) and letter (224B) grading.


230A-230B. Seminars: Literary Translation from Korean. (4-4) Seminar, three hours. Preparation: reading knowledge of Korean. In consultation with instructor, student prepares translation. Devoted to skill of producing accurate and readable translations, with emphasis on problems and techniques unique to poetry and prose. At end of term, students' translations are assembled in special publication. May be repeated once with consent of instructor. In Progress (230A) and letter (230B) grading.

232A-232B. Seminars: Topics in Modern Korean Literature. (4-4) Seminar, three hours. Preparation: at least five years of Korean. Recommended: reading knowledge of Chinese or Japanese. Limited to graduate students. Study of selected period, movement, theme, or author of 20th-century Korean literature, with critical review of secondary works in Western and Korean languages. May be repeated for credit with consent of instructor. In Progress (232A) and letter (232B) grading.


245A-245B. Seminar: Classical Indian Poetry. (4-4) Seminar, three hours. Preparation: reading knowledge of Korean. Critical reading and analysis of classical Indian poetry, including discussion of literary and cultural contexts of poetic genres. Nature of codes, conventions that make meaning possible. Review of latest Korean scholarship. May be repeated once with consent of instructor. In Progress (245A) and letter (245B) grading.


265A-265B. Seminars: Korean Buddhist Texts. (4-4) Seminar, three hours. Selected topics in Korean Buddhist texts. Coverage varies. In Progress (265A) and letter (265B) grading.

272. Seminar: Korean Christianity. (4) Seminar, three hours. Coverage of representative scholars’ contributions to Korean Christianity, with focus on Protestantism. Issues include politics, identities of Korean Christians and Western missionaries, church growth and decline, medical, educational, literary, and woman’s work, and Christianity’s encounters with Korean religions, and foreign missions. S/U or letter grading.

274. Seminar: Readings in Korean Christianity. (4) Seminar, three hours. Reading of recent secondary sources of Christianity in Korea, covering doctoral dissertations, journal articles, book chapters, and books in English and Korean to help graduate students understand recent scholarship on diverse topics in Korean Christianity. Letter grading.

295A-295B. Seminars: Topics in Traditional Korean Cultural History. (4-4) Seminar, three hours. Preparation: reading knowledge of Korean or literary Chinese. Discussion and research for major topics in Korean cultural history, such as Confucianization of Korean society, Practical Learning movement of late Choson dynasty, or Korean reactions to West in Eastern learning and enlightenment graduate students. Letter grading.

296A-296B. Seminars: Topics in Modern Korean Cultural History. (4-4) Seminar, three hours. Preparation: reading knowledge of Korean. Designed for graduate students. Graduate research seminar on selected topics in modern Korean history. In Progress (296A) and letter (296B) grading.

South Asian

Lower-Division Course

M60. Religion in Classical India: Introduction. (5) (Same as Religion M60D) Lecture, three hours; discussion, one hour. Introduction to religions of classical India—Vedic, Brahmanical, Hindu, Jain, and Buddhist—paying equal attention to change and continuity, with emphasis on chronological development. P/NP or letter grading.

Upper-Division Courses

110A. Elementary Sanskrit. (4) Lecture, three hours. Introduction to script and grammar with reading exercises and attention to significance of Sanskrit for understanding of other Indo-European languages. P/NP or letter grading.


110C. Advanced Sanskrit. (4) Lecture, three hours. Requisite: course 110C. Extensive reading in such texts as best serve students’ needs. May be repeated for credit with consent of instructor. P/NP (undergraduates), S/U (graduates), or letter grading.

150. Classical Indian Literature in Translation. (4) Lecture, three hours. Knowledge of Asian languages not required. Survey of some landmarks of classical Indian literature from second millennium B.C.E. into second millennium C.E., including both poetry and prose, “high” art and more popular genres, and secular and religious texts examined in their social and institutional contexts. P/NP or letter grading.

155. Topics in South Asian Cinema and Literature. (4) Lecture, three hours. Knowledge of Hindi/Urdu not required. Critical analysis of language and culture in South Asian diaspora as represented in films and literature. May be repeated once for credit, P/NP or letter grading.

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Graduate Courses

M222A-M222B. Vedic. (4-4) (Same as Indo-European Studies M222A-M222B and Iranian M222A-M222B.) Lecture, three hours. Preparation: knowledge of Sanskrit equivalent to course 110C. Characteristics of Vedas, dimity, and readings in Rig-Vedic hymns. Only course M222B may be repeated for credit. P/NP or letter grading.

230. Selected Readings in Sanskrit Texts. (4) Lecture, three hours. May be repeated for credit with consent of instructor. S/U or letter grading.

234A-234B. Introduction to Panini's Grammar. (4-4) Lecture, three hours. Requisite: course 110C. Reading of selected passages of text, with introduction to Panini's technique. S/U or letter grading.

236A-236B. Pali and Prakrits. (4-4) Lecture, three hours. Preparation: knowledge of Sanskrit equivalent to course 110B. Grammatical studies and reading of texts. Comparative considerations. S/U or letter grading.

243. Translation Workshop: Premodern Sanskrit, Pali, and/or Prakrit Texts. (2) Seminar, two hours. Requisite: course 110C. Translation, grammatical analysis, and discussion of selection from premodern Sanskrit, Pali, and/or Prakrit texts. S/U grading.

260. Buddhism in India. (4) Lecture, three hours; discussion, one hour. Knowledge of Indian languages not required. Overview of social and doctrinal history of Buddhism from its origin to its disappearance in India, based not only on texts but on archaeological, art historical, and inscriptional sources. Examination of both formal doctrine and actual practices and on what learned Buddhists did, saw, and made. Concurrently scheduled with course CM160. Letter grading.

Southeast Asian

Lower-Division Courses

M20. Visible Language; Study of Writing. (5) (Same as Asian M20, Indo-European Studies M20, Near Eastern Literature M20, and Slavic M20.) Lecture, three hours; discussion, one hour. Consideration of concrete means of language representation in writing systems. Earliest representations of language known are those of Near East dating to end of 4th millennium B.C. While literate civilizations of Egypt, Indus Valley, China, and Mesoamerica left little evidence of corresponding earliest developments, their antiquity and, in case of China and Mesoamerica, their evident iso-lation mark these centers as loci of independent developments in writing. Basic characteristics of early scripts, assessment of modern alphabetic writing systems, and presentation of conceptual basis of se-miotics. Examination of evolution and development of early non-Western writing systems. How Greco-Roman alphabet arose in 1st millennium B.C. and how it compares to other modern writing sys-tems. S/U or letter grading.

106. Buddhist Traditions in Indonesia. (4) (Same as Religion M60E.) Lecture, three hours. Introduction to historical development and contemporary practices of Buddhism in Indonesia. Examination of historical and cultural traditions, and how Buddhism may be used to foster development of Asian countries. S/U or letter grading.

205. Southeast Asian Culture and History. (4) Seminar, three hours. Designed to expose graduate students to study of Southeast Asia as region across multiple disciplines. Discussions led by instructor and guest faculty members. May be repeated for credit. S/U or letter grading.

Thai

Lower-Division Courses

1. Introductory Thai. (5) Lecture, five hours. Coverage of basic Thai grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

2. Intermediate Thai. (5) Lecture, five hours. Enforced requisite: course 1 with grade of C or better. Coverage of basic Thai grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

3. Introductory Thai. (5) Lecture, five hours. Enforced requisite: course 2 with grade of C or better. Coverage of basic Thai grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

3R. Thai Scripts. (5) Lecture, five hours. Recommended preparation: speaking and listening skills in Thai and Thai placement test. Training in reading and writing at introductory level. Completion of course 3R is equivalent to completion of one year of college-level Thai. P/NP or letter grading.

4. Intermediate Thai. (5) Lecture, five hours. Enforced requisite: course 4 with grade of C or better. Reinforcement of basic Thai grammar and coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/NP or letter grading.

5. Intermediate Thai. (5) Lecture, five hours. Enforced requisite: course 5 with grade of C or better. Reinforcement of basic Thai grammar and coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/NP or letter grading.

6. Intermediate Thai. (5) Lecture, five hours. Enforced requisite: course 5 with grade of C or better. Reinforcement of basic Thai grammar and coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/NP or letter grading.

Upper-Division Courses

100A-100B. Modern Southeast Asian Thought and Culture. (5-5) Lecture, five hours. Course 100A with grade of C or better is enforced requisite. Coverage of modern Southeast Asian thought and culture through in-depth reading of texts from region. Topics include history, politics, religion, and culture. S/U or letter grading.

101. Religion and Society in Southeast Asia. (4) Lecture, three hours; discussion, one hour. Critical issues related to major religions in Southeast Asia, with emphasis on religion and philosophy. P/NP or letter grading.

157. Gender Issues in Southeast Asia. (4) Seminar, three hours. Critical examination of gender issues in one or more Southeast Asian countries as they con-nect to social and political history of Southeast Asia. S/U or letter grading.

170A-170B-170C. Topics in Southeast Asian Stud-ies. (4-4-4) Lecture, three hours. Exploration of Southeast Asian culture through in-depth reading of texts and visual materials. Topics include literature, religion, folklore, cultural history, and society. P/NP or letter grading.

199. Individual Studies in Southeast Asian. (1-1) Tutorial, to be arranged. Limited to seniors and graduate students who desire more advanced study of region. May be repeated for credit. P/NP or graduate credit.

Upper-Division Courses

100A-100B-100C. Advanced Thai. (4-4-4) Lecture, three hours. Course 100A with grade of C or better is enforced requisite. Coverage of advanced topics on various aspects of Thai society, including modern literatures of Southeast Asia. Designed to expose students to range of literatures, predominantly novels and short stories, that were written across this region in response to dramatic changes caused by modernization and its aftermath. S/U or letter grading.

205. Southeast Asian Culture and History. (4) Seminar, three hours. Designed to expose graduate students to study of Southeast Asia as region across multiple disciplines. Discussions led by instructor and guest faculty members. May be repeated for credit. S/U or letter grading.

Thai

Lower-Division Courses

1. Introductory Vietnamese. (5) Lecture, two hours; discussion, three hours. Coverage of basic Vietnamese grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

2. Intermediate Vietnamese. (5) Lecture, five hours. Enforced requisite: course 1 with grade of C or better. Coverage of more advanced topics. Broadening of skills in conversation and composition, and how it compares to other modern writing systems. S/U or letter grading.
1A. Introductory Vietnamese for Heritage Learners. (5) Lecture, two hours; discussion, three hours. Not open to students who have learned, from whatever source, enough Vietnamese to qualify for more advanced courses. Designed for Vietnamese-heritage learners who have had no formal instruction in Vietnamese. Emphasis on spelling, basic grammar, reading, writing, conversation, and comprehension. P/NP or letter grading.

2. Introductory Vietnamese. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 1 with grade of C or better. Coverage of basic Vietnamese grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

2A. Introductory Vietnamese for Heritage Learners. (5) Lecture, two hours; discussion, three hours. Not open to students who have learned, from whatever source, enough Vietnamese to qualify for more advanced courses. Designed for Vietnamese-heritage learners who have had no formal instruction in Vietnamese. Emphasis on spelling, basic grammar, reading, writing, conversation, and comprehension. P/NP or letter grading.

3. Introductory Vietnamese. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 2 with grade of C or better. Coverage of basic Vietnamese grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

3A. Introductory Vietnamese for Heritage Learners. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 2A with grade of C or better. Coverage of basic Vietnamese grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

3B. Introductory Vietnamese Reading and Writing. (5) Lecture, five hours. Recommended preparation: speaking and listening skills in Vietnamese. Training in reading and writing skills at elementary level, equivalent to completion of one year of Vietnamese. P/NP or letter grading.

4. Intermediate Vietnamese. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 3 with grade of C or better. Reinforcement of basic Vietnamese grammar and coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/NP or letter grading.

5. Intermediate Vietnamese. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 4 with grade of C or better. Reinforcement of basic Vietnamese grammar and coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/NP or letter grading.

6. Intermediate Vietnamese. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 5 with grade of C or better. Reinforcement of basic Vietnamese grammar and coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/NP or letter grading.

8. Elementary Vietnamese: Intensive. (15) Lecture, 10 hours; discussion, 10 hours. Intensive course equivalent to courses 2, and 3. Covers 1-2 basic Vietnamese grammar, with equal emphasis on reading, writing, conversation, and comprehension. Offered in summer only. P/NP or letter grading.

40. War in Vietnamese Popular Culture. (5) Lecture, one hour; discussion, one hour. Knowledge of Vietnamese not required. Focus on popular culture produced and consumed by, or about, people in Vietnam and diasporas. Materials include theoretical and other scholarly texts, as well as literature, music, visual art, films, and comics. Reading of scholarly writings for argument, date, and methods, and learning to apply theoretical frameworks in readings and lectures to analysis of popular cultural productions. P/NP or letter grading.

Upper-Division Courses

100A-100B. Advanced Vietnamese. (4-4-4) Lecture, three hours. Enforced requisite: course 6 with grade of C or better or Vietnamese placement test. Designed to strengthen and build on language skills previously acquired at beginning and intermediate levels. Content-based readings and discussion, with various aspects of Vietnam, particularly its culture. Readings include both authentic original works and simplified texts. Each course may be taken independently for credit. P/NP or letter grading.

100C. Advanced Tutorial Instruction in Vietnamese. (2) Tutorial, two hours. Enforced requisite: course 6 or Vietnamese placement test. Tutorial and guided independent study to help students develop advanced proficiency in oral and written Vietnamese. May be repeated for credit. P/NP or letter grading.

155FL. Readings in Vietnamese. (2) Seminar, two hours. Requisite: course 3 or 3A. Enforced corequisite: course M155. Additional work in Vietnamese to augment work designed in course M155, including reading, writing, and other exercises in Vietnamese. P/NP or letter grading.

155F. Readings in Vietnamese. (2) Seminar, two hours. Requisite: course 3 or 3A. Enforced corequisite: course M155. Additional work in Vietnamese to augment work designed in course M155, including reading, writing, and other exercises in Vietnamese. P/NP or letter grading.

170. Variable Topics in Vietnamese Linguistics, Languages, and Cultures. (4) Lecture, three hours. Knowledge of Vietnamese may be required. Critical analysis of language and culture in Vietnam, exploring notion of Vietnam as culture area, surveying literary landscape through poetry and short stories. May be repeated for credit. P/NP or letter grading.

180A. Vietnam: History and Civilization to 1858. (5) Lecture, three hours; discussion, one hour. Recommended preparation: at least one Asian history or civilization course. Exploration of Vietnamese society and culture from origins to early 19th century, with emphasis on examination of ways in which interactions between indigenous and Chinese/Southeast Asian political and cultural forces helped shape religious, literary, and social traditions. P/NP or letter grading.

180B. Vietnam: History and Civilization, 1858 to Present. (4) Lecture, three hours; discussion, one hour. Recommended preparation: at least one Asian history or civilization course. Exploration of Vietnamese history and civilization during colonial and postcolonial eras, with emphasis on profound changes that swept through Vietnamese society during period of extended political and military conflict. P/NP or letter grading.

M186. Korea and Vietnam: Comparative Modern Histories. (4) (Same as Korean M186.) Seminar, three hours. Comparative survey of intertwined and parallel histories of Korea and Vietnam, organized chronologically, but structured around key themes that serve as basis for comparison. Modern experiences of colonial Vietnam and Korea have many significant parallels, including imposition of colonial control, transition to modernized societies within context of colonialism, and shared experiences of World War II. Both were also fierce opponents after war between communist regimes in north and strongly anticommunist regimes in south. Each also experienced warfare after division and direct involvement of U.S. during height of cold war between 1950s and 1970s. P/NP or letter grading.

Graduate Course

297B. Topics in Contemporary Vietnamese Culture. (4) Seminar, three hours. Selected topics in Vietnamese contemporary culture, including diasporic culture, with emphasis on cultural production. Primary materials combined with theoretical readings. S/U or letter grading.
Scope and Objectives

The atmospheric and oceanic sciences present a wide variety of problems of compelling scientific interest and increasing social concern. This is exemplified by efforts to improve air quality, degradations caused by severe storms and floods, attempts to control or modify weather phenomena, problems of long-range weather forecasts, climate change, and prediction, and expanding scientific frontiers into our outer atmosphere and atmospheres of other planets.

The Department of Atmospheric and Oceanic Sciences offers a broad curriculum in dynamic and synoptic meteorology, atmospheric physics and chemistry, and upper atmosphere and space physics.

The Bachelor of Science degree qualifies students for entry-level technical positions or represents valuable background for training in other professions. Master of Science and PhD degree holders work in universities, research centers, laboratories, and government services and, increasingly, in the rapidly burgeoning private sector.

Undergraduate Study

Atmospheric, Oceanic, and Environmental Sciences BS

Preparation for the Major

Required: Atmospheric and Oceanic Sciences 51, 90; Chemistry and Biochemistry 14A and 14B, or 20A and 20B; Earth, Planetary, and Space Sciences 71 (preferred) or Civil and Environmental Engineering M20 or Program in Computing 10A; Mathematics 3A, 3B, and 3C, or 31A, 31B, 32A, 32B, 33A, and 33B; Physics 1A or 1AH, 1B or 1BH, 1C or 1CH, 4AL, and 4BL, or 5A, 5B, and 5C.

Students interested in pursuing graduate studies in atmospheric and oceanic sciences or obtaining employment with the National Weather Service or other government agencies are strongly urged to select the Mathematics 31A through 39B sequence and the Physics 1 sequence.

Transfer Students

Transfer applicants to the Atmospheric, Oceanic, and Environmental Sciences major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one year of calculus, one year of calculus-based physics with laboratory, one general chemistry course with laboratory for majors, and one Matlab, Python, or C++ programming course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Four courses from Atmospheric and Oceanic Sciences 101, 103, 104, M105, 107, 112, three additional upper-division atmospheric sciences courses selected in consultation with the undergraduate advisers, and two upper-division courses from a list of chemistry, mathematics, physics, and statistics courses selected in consultation with the undergraduate advisers.

Atmospheric and Oceanic Sciences Minor

The Atmospheric and Oceanic Sciences minor provides a formal vehicle for students specializing in other science fields to pursue interests in the atmospheric and oceanic environment. It is designed to be flexible, recognizing that many topics in this field cross traditional disciplinary boundaries.

To enter the minor, students must have an overall grade-point average of 2.0 or better and must make an appointment with a departmental undergraduate adviser for approval in selecting a coordinated program of courses from within the department and related disciplines. For further information, contact the department at 310-825-1217.

Required Courses (28 units): Seven 4-unit courses, including (1) three from Atmospheric and Oceanic Sciences M100, 101, 102, 103, 104, M105, M106, C110, C115, M120, 130, 141, 145, 150, C160, C170, 180 and (2) four additional courses, two of which must be upper-division, from any of the above atmospheric and oceanic sciences courses beyond the minimum four required for Atmospheric and Oceanic Sciences 1, 2, 3, 186 (must be taken twice), Chemistry and Biochemistry 103, 110A, 110B, 113A, C113B, 114, Earth, Planetary, and Space Sciences 15, Ecology and Evolutionary Biology 109, C119A, 122, 123A or 123B, 147, 148, Mathematics 115A, 115B, 132, 135, 136, 146, 170A, 170B, Physics 110A, 110B, 112, M122, 131, 132. Other relevant courses from related disciplines may be substituted with prior approval of the department. At least five courses approved for the minor must be upper division.

Groups of courses relevant to specific subareas of atmospheric sciences include (1) atmospheric chemistry: Atmospheric and Oceanic Sciences 104, Chemistry and Biochemistry 103, 110A, 110B, C113B, 114; (2) atmospheric chemistry and biology: Atmospheric and Oceanic Sciences 101, 104, Ecology and Evolutionary Biology 109, C119A, 122; (3) atmospheric dynamics: Atmospheric and Oceanic Sciences 101, 102, Physics 112, 131, 132; (4) atmospheric dynamics and mathematical modeling: Atmospheric and Oceanic Sciences 101, 180, Mathematics 115A, 115B, 132, 135, 136, 142, 146; (5) oceanography and biology: Atmospheric and Oceanic Sciences 101, 103, 104, Ecology and Evolutionary Biology 109, 123A or 123B, 147, 148; (6) upper atmosphere: Atmospheric and Oceanic Sciences 101, M120, C170, Physics 110A, 110B, M122.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

One course may be taken on a Passed/Not Passed basis; each of the other minor courses must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Atmospheric and Oceanic Sciences offers Master of Science (MS), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Atmospheric and Oceanic Sciences.

Atmospheric and Oceanic Sciences

Lower-Division Courses

1. Climate Change: From Puzzles to Policy. (4) Lecture, three hours; discussion, one hour. Overview of fundamentals of Earth’s climate, including greenhouse effect, water and chemical cycles, outstanding features of atmospheric and ocean circulation, and feedback between different system components. Exploring and contentious scientific puzzles of climate system, including causes of ice ages, greenhouse warming, and el niño. Importance of climate science and prediction to society, with emphasis on science’s role in identifying, qualifying, and solving environmental problems such as ozone hole and greenhouse warming. P/np or letter grading.

2. Air Pollution. (4) Lecture, three hours; discussion, one hour. Causes and effects of high concentrations of pollution in atmosphere. Topics include nature and sources of gaseous and particulate pollutants, their transport, dispersion, modification, and removal, with emphasis on atmospheric processes on scales ranging from individual sources to global effects; interaction with biosphere and oceans; stratospheric pollution. P/np or letter grading.

2L. Air Pollution Laboratory. (1) Laboratory, one hour. Enforced corequisite: course 1. Investigations and demonstrations supporting material in course 1, including greenhouse effect, atmosphere and ocean circulation, past, present, and future climates, and role of science in climate change politics. P/np or letter grading.


3L. Introduction to Atmospheric Environment Laboratory. (1) Laboratory, one hour. Enforced corequisite: course 3. Investigations and demonstrations supporting material in course 3, including causes and effects of seasons, remote sensing and satellite picture interpretation, atmospheric stability, and weather systems (fronts and cyclones). P/np or letter grading.

5. Climates of Other Worlds. (4) Lecture, three hours; discussion, one hour. Introduction to atmospheres of planets and their satellites in solar system using information obtained during recent planetary exploration program. Elementary description of origin and evolu-
tion of atmospheres on planets. Climates on planets, conditions necessary for evolution of life, and its resulting effect on planetary environment. P/NP or letter grading.

M101. Introduction to Environmental Science. (4) (Same as Environmental Science 110.) Lecture, three hours; laboratory, one hour. Limited to undergraduate students. Introduction to environmental science as discipline and as way of thinking. Discussion of critical environmental issues at local and global scales. Fundamentals of physical, chemical, and biological processes important to environmental science. Laboratory exercises to augment lectures. Letter grading.

51. Fundamentals of Climate Science. (4) Lecture, three hours; discussion, one hour. Enforced requisites: Mathematics 3B or 32A, Physics 1B or 6B, with grades of C or better. Development of fundamental understanding of climate processes. Topics include global energy balance, atmospheric radiation and greenhouse effect, surface and boundary layer dynamics, atmospheric and oceanic circulation, global hydrological cycle, modes of climate sensitivity, climate modeling, and climate change. P/NP or letter grading.

88. Lower-Division Seminar. (4) Seminar, three hours. Variable topics; consult Schedule of Classes or department for topics to be offered in specific term. P/NP or letter grading.

90. Introduction to Undergraduate Research in Atmospheric and Oceanic Sciences. (4) Lecture, two hours; laboratory, two hours. Requisites: Chemistry 14A or 20A; Earth, Planetary, and Space Sciences 71 (or Cognitive Science 12 or Program in Exploration 10A); Mathematics 3A, 3B, or 31A, 31B; Physics 1A or 5A or 6A. Students gain basic ability to understand, communicate, and conduct scientific research in atmospheric and oceanic sciences. Basic skills of scientific process, finding and reading scientific literature, technical skills, such as data analysis and basic experimental techniques, and communication of scientific findings in oral and written form. Skills taught in context of projects from atmospheric and oceanic sciences.

Upper-Division Courses

M100. Earth and Its Environment. (4) (Same as Environment M111.) Lecture, three hours. Overview of Earth as system of distinct, yet intimately related, physical and biological elements. Origins and characteristics of atmosphere, oceans, and land masses. Survey of the investigation of life on Earth, particularly in relation to evolution of physical world. Consideration of possibility of technological solutions to global environmental problems using knowledge gained throughout course. Letter grading.


102. Climate Change and Climate Modeling. (4) Lecture, three hours; discussion, one hour. Enforced requisites: Mathematics 3C or 32A, Physics 1B or 6C, with grades of C or better. Global environmental issues in climate change due to human activities or natural causes; quantifying contributions to new science of climate modeling to understand and predict these changes. Physical processes in climate system and their impact on atmospheric circulation, Earth and year-to-year climate prediction. Greenhouse effect and global warming. P/NP or letter grading.


104. Fundamentals of Air and Water Pollution. (4) Lecture, three hours; discussion, one hour. Requisite: Chemistry 14B or 20B. Chemistry and physics of air and water pollution, including photochemistry, acid rain, and pollution meteorology and dispersal: groundwater and surface water pollution, chemical cycling, air/water interface, global atmospheric circulation. Letter grading.

105. Introduction to Chemical Oceanography. (4) (Same as Ecology and Evolutionary Biology M139.) Lecture, three hours; discussion, one hour. Introduction to course for physical sciences, life sciences, and engineering majors interested in oceanic environment. Chemical composition of oceans and nature of physical, chemical, and biological processes governing this composition in past and present. Cycles of major and minor oceanic constituents, with focus on those that are most important for life (i.e., carbon, nitrogen, phosphorus, silicon, and oxygen). Investigation of primary production, export production, remineralization, and air-sea gas exchange processes. Letter grading.

106. Applied Climatology: Principles of Climate Impact on Natural Environment. (4) (Same as Geography M106.) Lecture, three hours; discussion, one hour. Introduction to course for physical sciences, life sciences, and engineering majors interested in climate change. Focus is on those processes that are most important for life (i.e., carbon, nitrogen, phosphorus, silicon, and oxygen). Investigation of processes in contemporary applied climatology, including current practices, influence of climate on environment, and human influence on changing climates. P/NP or letter grading.

107. Biological Oceanography. (4) Lecture, three hours; discussion, one hour. Introductory course for physical sciences, life sciences, and engineering majors interested in marine biology. Focus is on those biological processes that are intrinsically tied to physical and chemical processes in oceans. Examination of processes that control distribution of abundance, diversity, trophic level, and population dynamics of organisms and their spatial and temporal variability. Letter grading.


112. Climate Change Assessment. (4) Lecture, three hours. Preparation: one-upper-division course in Atmospheric and Oceanic Sciences or Environmental Science. Requisite: Mathematics 3B or 31B. Projection of future anthropogenic climate change and understanding of natural climate variability depend on international climate model intercomparison projects, on large observing systems coordinating space and ground observations, and on multi-disciplinary climate assessments. Lectures, readings and projects address current issues in the scientific literature on assessment of climate change for students with prior background in introductory climate science. P/NP or letter grading.

CM114. Aquatic Geomicrobiology. (4) (Same as Earth, Planetary, and Space Sciences CM114.) Lecture, three hours; discussion, one hour. Requisite: course M105 or Earth, Planetary, and Space Sciences C107. Fundamental geomicrobiological metabolisms and biogeochemical reactions occurring in aquatic environments. How they interact with and impact our environment, and how they interact in complex ecosystems such as methane seeps, hydrothermal vents, coral reefs, microbial mats, or deep biosphere. Methodologies include molecular, physical-chemical, and chemoautotrophic pathways. Interpretation of geochemical profiles and understanding of how microorganisms govern mineralization and elemental cycling in aquatic systems. Concurrently scheduled with course CM237. P/NP or letter grading.

C115. Meteorology. (4) Lecture, three hours. Requisite: course 101. Observations of phenomena with long scales ranging from 20 km to 2,000 km. Topics include polar lows, airmass thunderstorms, multicell storms, supercell tornadoes, gust fronts, distichosis, microbursts, and dry line. Discussion on design of field project. Concurrently scheduled with course C228. P/NP or letter grading.


130. California’s Ocean. (4) Lecture, four hours. Recommended requisite: course 103 or M105. Circulation, biogeochemistry, biota, water quality, measurement techniques, environmental modeling, conservation, and management for California’s coastal ocean, including coastal measurement cruise and term project (paper and presentation). Letter grading.

135. Ocean Change in the Anthropocene. (4) Lecture, 90 minutes; laboratory, 90 minutes. Requisites: courses 103, 105. Review of main impacts of human activities on ocean, from warming and acidification to overfishing, pollution, and exploitation of marine resources. Discussion of ocean’s current state and sustainability. Introduction to global ocean datasets and IPCC-class model output. Student-led presentation to review significant papers from scientific literature and other articles. Letter grading.


C144. Atmospheric Boundary Layer. (4) Lecture, three hours. Enforced requisite: course 101 with grade of B+ or better. Atmospheric boundary layer is lowest portion of atmosphere, representing interface between Earth’s surface and its atmosphere. It is strongly affected by turbulence, and plays important role in exchange of heat, momentum, trace gases, and aerosols between Earth’s surface and free troposphere. Investigates dynamics of properties of boundary layer and processes that determine them. Concurrently scheduled with course C222. P/NP or letter grading.

145. Atmospheric Physics: Radiation, Clouds, and Aerosols. (4) Lecture, three hours; discussion, one hour. Requisites: Physics 1A, 1B, and 1C, or 6A, 6B, and 6C. Theory and application of atmospheric radiation, aerosol, and cloud processes. Topics include radiative transfer, cloud and rain formation, aerosol properties, impact of aerosol and clouds on climate. Letter grading.

150. Atmospheric and Oceanic Sciences Laboratory. Lecture, one hour; discussions, two hours. Requisites: Mathematics 3B or 31B, Physics 1B or 1C (or 6B and 6C). Many of today’s environmental problems, such as stratospheric ozone hole, current rise of greenhouse gases, and various severe weather phenomena, were first discovered and investigated using accurate observational techniques. Direct experimental observations remain crucial components of long-term efforts to study climate, and pollution of atmosphere and ocean. Introduction to experimental/observational approach in atmospheric and oceanic sciences. Students work in small groups to gain experience in design, setup, performance, analysis, and reporting of different experiments. Introduction to underlying principles of these experimental methods and basic data analysis tools. P/NP or letter grading.

Atmospheric and Oceanic Sciences / 189
Graduate Courses


200B. Introduction to Dynamics of Earth System. (4) Lecture, three hours. Overview of general circulation of atmosphere and ocean; global energy balances; coupled simulations (such as el niño); meso-scale, synoptic, and tropical phenomena; boundary layers, clouds, and convection; biogeocyclic cycles; climate variability and change. S/U or letter grading.


201C. Atmospheric Turbulence. (4) Lecture, three hours. Recommended requisite: course 200A. Recommended: course 201A. Turbulent flows that occur on relatively small scales (<~10 km) in both atmosphere and ocean. Classical homogeneous, shear, convective, and boundary-layer turbulence and its geophysical modification due to stratification, Earth’s rotation, and water phase changes. S/U or letter grading.


203A. Introduction to Atmospheric Chemistry. (4) (Same as Civil Engineering M262A.) Lecture, three hours. Recommended for undergraduates: Chemistry 20B. Principles of chemical kinetic, thermochemistry, spectroscopy, and photochemistry; chemical composition and history of Earth’s atmosphere; biogeochemical cycles of key atmospheric constituents; basic photochemistry of troposphere and stratosphere, upper atmosphere chemical processes; air pollution; chemistry and climate. S/U or letter grading.

203B. Introduction to Atmospheric Physics. (4) Lecture, three hours; discussion, one hour. Principles of radiative transfer; absorption, emission, and scattering of solar and infrared radiation; radiation budget consideration; aerosols in atmosphere; principles of water droplet and ice crystal formation; diffusion and accretion; precipitation processes; radiative forcings of clouds/aerosols and climate feedback. S/U or letter grading.

C205A. Introduction to Solar System Plasmas. (4) Lecture, three hours; discussion, one hour. Introduction to plasma physics occurring in sun, solar wind, magnetospheres, and ionospheres of planets, using simple fluid (magnetohydrodynamic) models as well as individual particle (radiation belt dynamics) approach. Solar-planetary coupling processes, geomagnetic phenomena, aurora. Concurrently scheduled with course C170. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

205B. Introduction to Solar-Terrestrial Physics. (4) Lecture, three hours; discussion, one hour. Aeronomy of upper atmospheres of Earth and other planets and some of their satellites—thermospheric structure and morphology; climate change; design and use of resources from Coupled Model Intercomparison Projects (CMIPs), topics from large multiclient climate assessments, including Intergovernmental Panel on Climate Change (IPCC). Issues in modeling of large evolving systems, including ideal canopy model, radiation, heat and CO₂ fluxes transfer, and satellite data application. Laboratory sessions included. S/U or letter grading.

209. Climate Change Assessment. (4) Lecture, three hours; discussion, one hour. Corequisites: graduate atmospheric, oceanic, hydrological, or climate science courses. Lectures, readings, and projects on current issues in projections of future anthropogenic climate change; design and use of resources from Coupled Model Intercomparison Projects (CMIPs), topics from large multiclient climate assessments, including Intergovernmental Panel on Climate Change (IPCC). Issues in modeling of large evolving systems, including ideal canopy model, radiation, heat and CO₂ fluxes transfer, and satellite data application. Laboratory sessions included. S/U or letter grading.

M206. Introduction to Biophysical Modeling of Land Surface Processes and Land/Airshphere Interactions. (Same as Geography M206.) Lecture, two hours; laboratory, one hour; reading period, one hour. Designed for graduate students. Presentation of introductory knowledge for graduate students to understand nature, principles, and scope of biophysical modeling of land surface processes, including ideal canopy model, radiation, and CO₂ fluxes transfer, and satellite data application. Laboratory sessions included. S/U or letter grading.


successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

212A. Numerical Methods in Geophysical Fluid Dynamics (4) Lecture, three hours. Requisites: courses 201B, 212A. Dynamics of numerical weather prediction and climate models and their computational design. Basic governing equations. Vertical and horizontal coordinate systems. Quasi-geostrophic and balanced models. Shallow-water equation model. Three-dimensional primitive equation models. Limited-area modeling. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.


215. Ocean Circulation. (4) Lecture, three hours. Requisites: courses 200A, 200A. Phenomena, theory, and modeling of ocean circulations with global to regional scales. Major oceanic types include thermohaline and wind-driven currents. Examination of relationships between ocean circulations and smaller-scale motions, atmospheric climate, and biogeochemical transport. S/U for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

216A. Tropical Motions with Moist Processes. (4) Lecture, three hours. Requisite: course 216C. Cumulus convection and the boundary layer in tropics. Cloud clusters and mesoscale convection systems. Interaction of cumulus convection with large-scale atmospheric circulation. General circulation models of tropical waves. Tropical 30-50 day oscillation. Quasi-biennial and semiannual oscillations. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.


218. Dynamics of Atmosphere/Ocean System. (4) Lecture, three hours. Transfer of properties between atmosphere and ocean; wind-driven ocean currents; coastal currents and wave processes; air-sea interactions. Effects of oceans on climate. S/U for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

222. Atmospheric Boundary Layer. (4) Lecture, three hours. Atmospheric boundary layer is lowest portion of atmosphere, representing interface between Earth’s surface and atmosphere, is strongly affected by turbulence, and plays important role in exchange of heat, momentum, trace gases, and aerosols between Earth’s surface and free troposphere. Investigation of properties of atmospheric boundary layer and processes that determine them. Concur- rently scheduled with course C144. S/U or letter grading.

224A. Atmospheric Turbulence. (4) Lecture, three hours. Kinematics of homogeneous and shear flow turbulence. Surface and planetary boundary layers, including heat transfer and turbulent convection. Survey of field and laboratory observations and their interpretation to understanding of processes. Consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

224B. Atmospheric Diffusion and Air Pollution. (4) Same as Civil Engineering M262B. Lecture, three hours. Nature and sources of atmospheric pollution; diffusion from point, line, and area sources; pollution dispersion in urban complexes; meteorological factors and air pollution potential; meteorological aspects of air pollution. S/U for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.


228. Mesoscale Modeling. (4) Lecture, three hours. Requisites: courses 201C, 228B. Numerical and analytical solutions for three-dimensional and mesoscale motion, from shallow sea sources to large complex systems. Model frameworks, assumptions, parameterizations, and solution techniques. Role of modeling efforts in understanding dynamic structure and behavior of systems. S/U for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

229. Meso Scale Modeling. (4) Lecture, three hours. Requisites: courses 201C, 228B. Numerical and analytical solutions for three-dimensional and mesoscale motion, from shallow sea sources to large complex systems. Model frameworks, assumptions, parameterizations, and solution techniques. Role of modeling efforts in understanding dynamic structure and behavior of systems. S/U for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

Atmospheric Physics and Chemistry

230A. Atmospheric Chemistry I. (4) Lecture, three hours. Requisite: course M203A. Photochemistry of troposphere; physical chemistry of surfaces and solutions; chemical and physical fate of atmospheric organic chemistry; regional and global biogeochemical cycles; current issues in global change. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

230B. Atmospheric Chemistry II. (4) Lecture, three hours. Requisite: course M203A. Photochemistry of stratosphere and mesosphere; stratospheric processes; stratospheric pollution and ozone layer; physical chemistry of upper atmosphere clouds and aerosols; comparative photochemistry of planetary atmospheres and observational techniques and results. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.


M235. Ocean Biogeochemical Dynamics and Climate. (4) Same as Environmental and Evolutionary Biology M238.) Lecture, three hours. Interaction of ocean biogeochemical cycles with physical climate system. Biogeochemical processes controlling carbon dioxide feedbacks in oceans on time scales from few million years to several years. Anthropogenic perturbation of global carbon cycle and climate. Response of ocean ecosystems to past and future global changes. Use of isotopic and oceanic tracers to study biogeochemical cycles and climate. Interactions between oceanic biogeochemical cycles on land and in ocean. S/U or letter grading.


CM237. Aquatic Geomicrobiology. (4) Same as Earth, Planetary, and Space Sciences CM214.) Lecture, three hours; discussion; one hour. Recommended requisite: course M105 or Earth, Planetary, and Space Sciences C107. Focused on microbial ecological and chemical metabolisms and biogeochemical reactions occurring in aquatic systems, how they impact their environment, and how they interact in complex ecosystems such as methane seeps, hydrothermal vents, coral reefs, microbial mats, or deep biosphere. Metabolisms include different phototrophic, heterotrophic, and chemolithotrophic pathways. Interpretation of biogeochemical cycles and understanding of how microorganisms govern mineralization and element cycling in aquatic systems. Concurrently sched- uled with course CM114. S/U or letter grading.

240A. Radar Meteorology. (4) Lecture, three hours. Radar detection of spherical and nonspherical parti- cles; use of radar in studying size distributions of cloud and precipitation particles, precipitation inten- sity and amount, updraft velocities, horizontal wind speed, and turbulence; detection of convective clouds, thunderstorms, tornadoes, hurricanes, squall lines, and fronts; clear air echoes. S/U for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

C240B. Remote Sensing of Atmosphere and Ocean. (4) Lecture, three hours. Requisite: courses 15, 16, 16B. Theory and techniques of remote sensing: atmospheric spectroscopy, scattering, and polariza-
tion; passive and active techniques; relevant satellite systems; inversion methods; remote sensing of clouds, aerosols, temperature, precipitation, and trace constituents; remote sensing of oceans and biosphere. Concurrently scheduled with course C160. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

244A. Atmospheric Radiation. (4) Lecture, three hours. Requisite: course 203B. Presentation of computational methods for solar and thermal infrared radiative fluxes and heating rates in clear, aerosol, and cloudy atmospheres and planetary surfaces. Topics include line-by-line and related k-distribution methods for treating gaseous absorption, simplified methods for radiative transfer in Rayleigh and Lorenz/Mie atmospheres, and global radiative equilibrium. Use of user-friendly computer code required to perform calculations of radiative fluxes and heating rates in various atmospheric conditions for climate applications. S/U or letter grading.

Upper Atmosphere and Space Physics

250A. Solar System Magnetohydrodynamics. (4) Lecture, three hours. Requisite: course C205A. Derivation of MHD equations with two fluid aspects, general relativistic gravitational and magnetic field effects, shock waves, and instabilities. Applications to statics and dynamics of solar wind and planetary magnetospheres and to solar wind/magnetosphere/ionosphere coupling. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

250B. Solar System Microporous Plasma Processes. (4) Lecture, three hours. Requisite: course C205A. Adiabatic charged particle dynamics; incoherent radiation processes; collective effects in plasma; propagation characteristics of electrostatic and electromagnetic waves; interaction of resonant interaction between charged particles and plasma waves. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

256. Ionospheric Electrodynamics. (4) Lecture, three hours. Ionospheric structure, currents, and electric fields; equatorial and high-latitude ionospheres; ionospheric control of magnetospheric phenomena. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

257. Radiation Belt Plasma Physics. (4) Lecture, three hours. Requisite: course 250B. Turbulent plasma instabilities and their relation to satellite observations and magnetospheric structure. Processes responsible for source, loss, and transport of energetic radiation belt particles. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.


260. Data Analysis in Atmospheric and Oceanic Sciences. (4) Lecture, three hours; laboratory, one hour. Emphasis on computer applications in atmospheric and oceanic research. Topics include numerical and statistical methods. S/U or letter grading.

261A. Advanced Topics in Atmospheric Sciences. (2 to 4 each) Seminar, three hours; laboratory. Additional topics of current interest. May be repeated for credit. S/U or letter grading.

262. Seminar in Upper Atmospheric Dynamics. (2) Seminar, one hour. Selected topics of current research interest. May be repeated for credit. S/U or letter grading.

263. Seminar: Atmospherics. (2) Seminar, one hour. Selected topics of current research interest. May be repeated for credit. S/U or letter grading.

264. Seminar: Theoretical Atmospheric Radiation. (2) Seminar, one hour. Selected topics of current research interest. May be repeated for credit. S/U or letter grading.

265. Seminar: Recent Advances in Atmospheric Radiation. (2) Seminar, one hour. Selected topics of current research interest. May be repeated for credit. S/U or letter grading.

266. Seminar: Recent Advances in Oceanic Radiation. (2) Seminar, one hour. Selected topics of current research interest. May be repeated for credit. S/U or letter grading.

267. Seminar: Recent Advances in Upper Atmospheric Dynamics. (2) Seminar, one hour. Selected topics of current research interest. May be repeated for credit. S/U or letter grading.

268. Seminar: Recent Advances in Upper Atmospheric Electrodynamics. (2) Seminar, one hour. Selected topics of current research interest. May be repeated for credit. S/U or letter grading.

269. Seminar: Recent Advances in Ionospheric Physics. (2) Seminar, one hour. Selected topics of current research interest. May be repeated for credit. S/U or letter grading.

270. Seminar: Atmospheric Sciences. (2) Seminar, one hour. May be repeated for credit. S/U or letter grading.

271. Seminar: Atmospheric Dynamics. (2) Seminar, one hour. May be repeated for credit. S/U or letter grading.


Special Studies

270. Seminar: Atmospheric Sciences. (2) Seminar, one hour. May be repeated for credit. S/U or letter grading.

271. Seminar: Atmospheric Dynamics. (2) Seminar, one hour. May be repeated for credit. S/U or letter grading.


274. Seminar: Atmospheric Chemistry. (2) Seminar, one hour. May be repeated for credit. S/U or letter grading.


276. Seminar: Mesoscale Processes. (2) Seminar, one hour. Selected topics of current research interest in convection, extratropical cyclones, and fronts. May be repeated for credit. S/U or letter grading.

277. Seminar: Coastal Ocean. (2) Seminar, one hour. Selected topics of current interdisciplinary research in marine and coastal processes, including physical oceanography, biogeochemistry, marine biology, coastal engineering, atmospheric processes, and health-related issues. May be repeated for credit. S/U or letter grading.

280. Special Topics in Clouds and Climate. (2 to 4) Seminar, two hours. May be repeated for credit. S/U or letter grading.

281. Special Topics in Dynamic Meteorology. (2 to 4) Lecture, two hours. Individual meetings with instructor to be arranged. Content varies from year to year. S/U or letter grading.

282. Special Topics in Oceanography. (2 to 4) Lecture, two hours. Individual meetings with instructor to be arranged. May be repeated for credit. S/U or letter grading.

285. Special Topics in Solar Planetary Relations. (2 to 4) Lecture, two hours. Individual meetings with instructor to be arranged. May be repeated for credit. S/U or letter grading.
The Bioengineering major is a designated capstone major. Utilizing knowledge from previous courses and new skills learned from the capstone courses, undergraduate students work in teams to apply advanced knowledge of mathematics, science, and engineering principles to address problems at the interface of biology and engineering and to develop innovative bioengineering solutions to meet specific sets of design criteria. Coursework entails construction of student designs, project updates, presentation of projects in written and oral format, and team competition.

**Bioengineering BS**

**Capstone Major**

**Preparation for the Major**

**Required:** Bioengineering 10; Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL, 30B; Civil and Environmental Engineering M20 or Computer Science 31 or Mechanical and Aerospace Engineering M20; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4AL.

Students must also complete one of two life sciences sequences—either Life Sciences 2 (satisfies HSS/GE life sciences requirement) and 3, OR 7A (satisfies HSS/GE life sciences requirement) and 7C. They may not substitute courses in either sequence.

**The Major**

Students must complete the following courses:

1. Bioengineering 100, 110, 120, 165EW (or Engineering 183EW or 185EW), 167L, 176, 180, Electrical Engineering 100; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; two capstone design courses (Bioengineering 177A, 177B).

2. Two major field elective courses (8 units) from Bioengineering C101, C106, C131, C155, M260 (a petition is required for M260).

3. Five additional major field elective courses (20 units) from Bioengineering C101 (unless taken under item 2), CM102, CM103, C104, C105, C106 (unless taken under item 2), C131 (unless taken under item 2), CM140, CM145, C147, M153, C155 (unless taken under item 2), C170, C171, CM178, C179, 180L, C183, C185, CM186, CM187, 199 (8 units maximum) 

Three of the major field elective courses and the three technical breadth courses may also be selected from one of the following tracks. Bioengineering majors cannot take bioengineering technical breadth courses to fulfill the technical breadth requirement.

**Biomaterials and Regenerative Medicine**

Bioengineering C104, C105, CM140, C147, C183, C185, 199 (8 units maximum), Materials Science and Engineering 104, 110, 111, 120, 130, 132, 140, 143A, 150, 151, 160, 161. The above materials science and engineering courses may be used to satisfy the technical breadth requirement.

**Biomedical Devices**

Bioengineering C131, M153, C172, 199 (8 units maximum), Electrical Engineering 102, Mechanical and Aerospace Engineering C187L. The electrical engineering or mechanical and aerospace engineering courses listed above may be used to satisfy the technical breadth requirement. For Bioengineering 199 to fulfill a track requirement, the research project must fit within the scope of the track field, and the research report must be approved by the supervisor and vice chair.

For information on University and general education requirements, see the College and Schools chapter earlier in this catalog.

**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

**Graduate Degrees**

The Department of Bioengineering offers Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Bioengineering.

**Bioengineering**

**Lower-Division Course**

10. Introduction to Bioengineering. (2) Lecture, two hours; discussion, one hour; outside study, three hours. Preparation: high school biology, chemistry, mathematics, physics. Introduction to scientific and technological bases for established and emerging subfields of bioengineering, including biotechnology, bioinstrumentation, and biosignal processing, biomechanics, biomaterials, tissue engineering, biotechnology, biological imaging, biomedical optics and lasers, neuroscience, and biomolecular machines. Letter grading.

**Upper-Division Courses**

100. Bioengineering Fundamentals. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: Mathematics 32A, Physics 1A. Fundamental basis for analysis and design of biological and biomedical devices and systems. Classical and statistical thermodynamic analysis of biological systems. Material, energy, charge, and force balances. Introduction to network analysis. Letter grading.


CM102. Human Physiological Systems for Bioengineering I. (4) Same as Physiological Science CM102) Lecture, three hours; laboratory, two hours. Preparation: human molecular biology, biochemistry, and cell biology. Not open for credit to Physiological Science majors. Broad overview of basic physiological activities and organization of human body in system (organ/tissue) to system basis, with particular emphasis on molecular basis. Modeling/simulation of functional aspect of biological system included. Actual demonstration of biomedical instruments, as well as visits to biomedical facilities. Concurrently scheduled with course CM202. Letter grading.

CM103. Human Physiological Systems for Bioengineering II. (4) Same as Physiological Science CM103) Lecture, three hours; laboratory, two hours. Preparation: human molecular biology, biochemistry, and cell biology. Not open for credit to Physiological Science majors. Molecular-level understanding of human anatomy and physiology in selected organ
systems (digestive, skin, musculoskeletal, endocrine, immune, urinary, reproductive). System-specific modul-
ing/simulations (immune regulation, wound healing, muscle mechanics and energetics, acid-base balance, excretion). Functional basis of biomedical in-

104. Physical Chemistry of Biomacromolecules. (4) Lecture, four hours; laboratory, two hours; outside study, seven hours. Requisites: Chemistry 20A, 20B, 30A, Life Sciences 2, 3. To understand biological materials and design synthetic replacements, it is imperative to understand chemical properties of biomacromolecules such as protein or DNA can be ana-
lized and characterized by applying fundamentals of polymer physical chemistry. Investigation of polymer structure and properties, solution of charged and neutral macromolecules, and viscoelasticity. Application of engineering principles to problems involving biomacromolecules such as protein conformation, solvation of charged macromolecules, and separation and characterization of biomac-
romolecules. Concurrently scheduled with course C204. Letter grading.

105. Engineering of Bioconjugates. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: Chemistry 20A, 20B, 20L. Highly recommended: one organic chemistry course. Bioconjugate chemistry is science of coupling bio-
molecules to each other by covalent linkages. Conjugates can be used for tagging of biological markers in bio-
logically active agents. This course will be focused on principles of conjugate chemistry. Advantages and disad-
vantages of different linkers will be covered in detail. Focus of this course is to convey fundamental chemi-
ycrofabrication and nanofabrication. Focus on con-
cepts, physical and chemical properties of biomolecular materials science that concern materials aspects of molecular biology, cell bi-
ology, and bioengineering. Understanding of different types of material, such as van der Waals interactions, entropically modulated electrostatic interactions, hydrophobic interac-
tions, hydration and solvation interactions, polymer-
merized interactions, depletions, micelles, and nano-
scopic recognition, and others. Illustration of these ideas using examples from bioengineering and biomedical engineering. Students should be able to make simple calculations and estimates that allow them to engage in broad spectrum of bioengineering problems, such as those in drug and gene delivery and tissue engi-
neering. May be taken independently for credit. Con-
currently scheduled with course C231A. Letter grading.

109A. Biomolecular Materials Science I. (4) Le-
cture, four hours; discussion, one hour; outside study, seven hours. Overview of chemical and physical foun-
dations of biomolecular materials science that concern materials aspects of molecular biology, cell bi-
ology, and bioengineering. Understanding of different types of material, such as van der Waals interactions, entropically modulated electrostatic interactions, hydrophobic interac-
tions, hydration and solvation interactions, polymer-
merized interactions, depletions, micelles, and nano-
oscopic recognition, and others. Illustration of these ideas using examples from bioengineering and biomedical engineering. Students should be able to make simple calculations and estimates that allow them to engage in broad spectrum of bioengineering problems, such as those in drug and gene delivery and tissue engi-
neering. May be taken independently for credit. Con-
currently scheduled with course C231A. Letter grading.

109B. Biomolecular Materials Science II. (4) Le-
cture, four hours; discussion, one hour; outside study, seven hours. Course 109A is not required to take 109B. Overview of chemical and physical foundations of biomolecular materials science that concern materials aspects of molecular biology, cell biology, and bioen-
gineering. Understanding of different basic types of biomolecules, with emphasis on nucleic acids, pro-
teins, and lipids. Study of how biological and biomi-
metic systems organize into their functional forms via self-assembly and how these structures impart bio-
logical function. Illustration of these ideas using exam-
les from bioengineering and biomedical engi-
neering. Case study on current topics, including drug delivery, gene therapy, cancer therapeutics, emerging pathologies, and self-assembled disease states. May be taken independently for credit. Con-
currently scheduled with course C231B. Letter grading.

110. Biotransport and Bioreac tion Processes. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: course 100, Mathematics 21A. Application of calculus to analysis of microfluidic transport, heat transfer, mass transfer, binding events, and biochemical reactions in systems of interest to bioen-
gineers, including cells, tissues, organs, human body, extracorporeal devices, tissue engineering systems, and biotificial organs. Introduction to pharmacoki-
tetic analysis. Letter grading.

120. Biomedical Transducers. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. En-
forced requisites: Engineering 100, Mathematics 23B, Physics 1C. Princi-
ples of transduction, design characteristics for differ-
ent measurements, reliability and performance character-
ization. Emphasis on silicon-based microfabricated and nano-
fabricated sensors. Novel materials, biocompati-
bility, biostability. Safety of electronic interfaces. Actu-
ator design and interfacing control. Letter grading.

1211. Nanopore Sensing. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 100, 120, Life Sciences 2, 3, Physics 1A, 1B, 1C. Analysis of sensors based on measurements of fluctuating ionic conductance through artificial or protein nanopores. Physics of pore conductance. Applications to single molecule detection and DNA sequencing. Review of current lit-
terature and technological applications. History and instrumenta-
tion of electrical measurements in electro-
ytes, nanopore fabrication, ionic conductance through pores and single channel measurements and instrumenta-

123. Applied Tissue Engineering: Clinical and Ind-
ustrial Perspective. (4) Lecture, four hours; dis-
cussion, two hours; outside study, seven hours. Re-
quites: course CM102, Chemistry 20A, 20B, 20L, Life Sciences 1 or 2. Overview of central topics of tissue engineering, with focus on how to build artificial tissues into regulated clinically viable products. Topics include biomaterials selection, cell source, delivery methods, FDA approval processes, and physical/ chemical and biological testing. Case studies include skin and artificial skin, bone and cartilage, blood ves-

nels, neurotransience, and liver, kidney, and other organs. Clinical and industrial perspectives of tissue engineering products, including constraints, clinical limitations, and regulatory challenges in design and development of tissue-engineering de-

125. Introduction to Microscale and Nanoscale Manuf acturing. (4) Same as Chemical Engineering M153, Electrical Engineering M154, Mechanical and Aerospace Engineering CM140. Lecture, four hours; labora-
tory, four hours; outside study, five hours. Enforced requisites: Chemistry 20A, Physics 1A, 1B, 1C, 4AL, 4BL. Introduction to general manufac-
turing methods, microfabrication, and nanofabrication. Focus on con-
cepts, physics, and instruments of various microfabri-
cation and nanofabrication techniques that have been broadly applied to microfluidic systems to manipulate fluids, cells, and particles, including various photolithography technologies, physical and chemical deposition methods, and physical and chemical etching methods. Hands-on experience for fabricating microstructures and nanoscale systems in modern cleanroom environment. Letter grading.

1255. Fluid-Particle and Fluid-Structure Interac-
tions in Microflows. (4) Lecture, four hours; labora-
tory, one hour; outside study, seven hours. Enforced requisites: course 110. Introduction to Lagrangian and Eulerian frames, conservation equations, assumptions, and simplifications. Analyt-
ic framework for calculating simple flows and nu-
merical methods to solve and gain intuition for com-
plex flows. Forces on particles in Stokes flow and fi-
nite-inertia flows. Flows induced around particles with and without finite inertia and implications for particle-
particle interactions. Secondary flows induced by streaming and particles in simple flows. Flow separations by fluid dynamic forces: field-flow frac-
tonation, inertial focusing, structure-induced separa-
tions. Application concepts in internal biological flows and applications for biopharmaceuticals. Hetero-
genesis become sufficiently fluent with fluid mechanics va-
cabulary and techniques, design and model microflu-
idsic systems to manipulate fluids, cells, and particles, and develop strong intuition for how fluid and parti-

cles behave in arbitrary structured microchannels over range of Reynolds numbers. Concurrently scheduled with course C255. Letter grading.

165EW. Bioengineering Ethics. (4) Lecture, four hours; discussion, three hours; outside study, five hours. All professions have ethical rules that derive from moral theory. Bioengineers need to establish principles that address ethical problems about life, such as when do fertilized eggs become people? Should ending of life ever be assisted? At what cost should it be maintained? Bioengineers should make these decisions in practice. Engineering ethics addresses ethical problems about producing devices from molecules to bridges, so engineers need to consider questions relevant to all devices and issues about cost? When are weapons too dangerous to design? At what point does benefit of committing to building devices outweigh need to wait for more scientific determination of their effectiveness? Bioengineers must be aware of consequences of applying such devices to all living systems. Emphasis on research and writing within engineering environments. Satisfies engineering writing requirement. Letter grading.

167L. Bioengineering Laboratory. (4) Lecture, two hours; laboratory, six hours; outside study, four hours. Enforced requisite: Chemistry 20L. Laboratory experiments on spectroscopic measurement devices, optical properties of biological materials, soft lithography, and cell culture culminate in design of engineered surface for cell growth. Introduction to techniques used in laboratories and their underlying physical or chemical properties. Case studies connect laboratory techniques to current biomedical engineering research and reinforce experimental design skills. Letter grading.

C170. Energy-Tissue Interactions. (4) Lecture, three hours; discussion, two hours; outside study, nine hours. Enforced requisites: Life Sciences 2, Physics 1C. Introduction to therapeutic and diagnostic use of energy delivery devices in medical and dental applications, with emphasis on understanding device and chemical properties. Case studies connect laboratory techniques to current biomedical engineering research and reinforce experimental design skills. Letter grading.

C170L. Introduction to Techniques in Studying Laser-Tissue Interaction. (2) Laboratory, four hours; outside study, two hours. Corequisite: course C170. Introduction to simulation and experimental techniques used in studying laser-tissue interactions. Topics include computer simulations of light propagation in tissue, measuring absorption spectra of tissue, and fluorescence spectroscopy. Biological and physical models of tissue are presented. Concurrently scheduled with course C270L. Letter grading.

C171. Laser-Tissue Interaction II: Biologic Spectroscopy. (4) Lecture, four hours; outside study, eight hours; practical work, one hour. Corequisites: Chemistry 30B, Life Sciences 2, 3, Mathematics 32A. Introduction to optical spectroscopy principles, design of spectroscopic measurement devices, optical properties of tissues, and fluorescence spectroscopy. Biological and physical models of tissue are presented. Concurrently scheduled with course C271. Letter grading.

C172. Design of Minimally Invasive Surgical Tools. (4) Lecture, three hours; discussion, two hours; outside study, five hours. Prerequisites: Chemistry 20B, 20L. Design for physical sciences, life sciences, and engineering majors. Introduction to optical microscopy, biocompatibility, and soft lithography, and cell culture culminate in design of engineered surface for cell growth. Introduction to techniques used in laboratories and their underlying physical or chemical properties. Case studies connect laboratory techniques to current biomedical engineering research and reinforce experimental design skills. Letter grading.

C177A. Bioengineering Capstone Design I. (4) Lecture, two hours; laboratory, six hours; outside study, four hours. Enforced requisite: course C177A. Lectures, seminars, and discussions on aspects of biomedical device and therapeutic design, including topics such as need finding, intellectual property,entrepreneurial management. Working in teams, students develop innovative solutions to address current problems in medicine and biology. Students conduct directed experiments and computational modeling, give oral presentations, write reports, and participate in bioengineering design competition. Letter grading.

CM176. Introduction to Biomaterials. (4) (Same as Materials Science CM180.) Lecture, three hours; discussions, two hours. Enforced requisites: Chemistry 20A, 20B, and 20L, or Materials Science 104. Engineering materials used in medicine and dentistry for repair and/or restoration of damaged natural tissues. Topics include relationships between material properties, suitability to task, surface chemistry, processing and treatment methods, and biocompatibility. Concurrently scheduled with course CM278. Letter grading.


180. System Integration in Biology, Engineering, and Medicine I. (4) Lecture, three hours; discussion, two hours; outside study, seven hours. Enforced requisites: courses 100, 110, 120, Life Sciences 3, Physics 1B, Chemistry 20B. Part I of two-part series. Molecular basis of normal physiology and pathophysiology, and engineering design principles of cardiovascular and pulmonary systems. Fundamental engineering principles of selected medical therapeutic devices. Letter grading.

180L. System Integration in Biology, Engineering, and Medicine I Laboratory. (4) Lecture, one hour; laboratory, four hours; clinical visits, four hours; outside study, three hours. Corequisite: course 180. Hands-on experimentation and clinical applications of selected medical therapeutic devices associated with cardiovascular and pulmonary disorders. Letter grading.

C183. Targeted Drug Delivery and Controlled Drug Release. (4) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: Chemistry 20B, 20L. Concepts required to comprehend understanding of modern biology, physiology, biotechnology, and engineering. Targeted delivery of genes and drugs and their controlled release are increasingly being used to treat diseases and relevant to tissue engineering and regenerative medicine. Drug pharmacodynamics and clinical pharmacokinetics. Application of engineering principles (diffusion, transport, kinetics) to process drug formulation and delivery to establish rationale for design and development of novel drug delivery systems that can provide spatial and temporal control of drug release. Students work with specialized structural and interfacial properties. Exploration of both chemistry of materials and physical presentation of devices and compounds used in delivery and release. Concurrently scheduled with course C283. Letter grading.

C184. Introduction to Computational and Systems Biology. (2) (Same as Computational and Systems Biology M184 and Computer Science M184.) Lecture, two hours; laboratory, four hours. Enforced requisites: one course from Civil Engineering M20, Computer Science 31, Mechanical and Aerospace Engineering M20, or Program in Computing 10A, and course CM187. Bioinformatics seminar for students designed to introduce students to computational and systems modeling and computation in biology and medicine, providing motivation, flavor, culture, and cutting-edge contributions in all aspects and aiming for more informed basis for focused studies by students with computational and systems biology interests. Presentations by individual UCLA researchers discussing their active computational and systems biology research. P/NP grading.

C185. Introduction to Tissue Engineering. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Enforced requisite: course CM185. Introduction to principles for tissue engineering. Over range of Reynolds numbers. Concurrently scheduled with course C272. Letter grading.

CM186. Computational Systems Biology: Model- ing and Simulation of Biological Systems. (5) (Same as Computational and Systems Biology M186, Computer Science CM186, and Ecology and Evolutionary Biology M178.) Lecture, four hours; laboratory, three hours; outside study, eight hours. Corequisite: Electrical Engineering 102. Dynamic biosystems modeling and computer simulation methods for studying biological/biomedical processes and systems at multiple levels of organization. Control system, multicompartmental, predator-prey, pharmacokinetic (PK), pharmacodynamic (PD), and other structural modeling methods applied to life sciences problems at molecular, cellular, biochemical pathways/networks, organ, and organismic levels. Both theory- and data-driven modeling, with focus on translating biomodeling goals and data into mathematics models and implementing them for verification and analysis. Basics of numerical simulation algorithms, with modeling software exercises in class and PC laboratory assignments. Concurrently scheduled with course CM286. Letter grading.

CM187. Research Communication in Computational and Systems Biology. (2 to 4) (Same as Computational and Systems Biology M187 and Computer Science M187.) Lecture, three hours; outside study, eight hours. Requisite: course CM186. Closely directed, interactive, and real research experience in active quantitative systems biology research laboratory. Direction on how to focus on topics of current interest in scientific community, appropriate to student interests and capabilities. Critiques of oral presentations and written progress report explain how to proceed with search for research results. Major emphasis on effective research reporting, both oral and written. Concurrently scheduled with course CM287. Letter grading.

188. Special Courses in Bioengineering. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Special topics in bioengineering for undergraduates taught on experimental or temporary basis, such as those taught by resident and visiting faculty members. May be repeated once with credit with topic or instructor change. Letter grading.

194. Research Group Seminars: Bioengineering. (4) Seminar, three hours. Limited to bioengineering undergraduate students who are part of research-oriented groups in the bioengineering program. Discussion of current research literature in research specialty of faculty member teaching course. Student presentation of projects in research specialty. May be repeated for credit. Letter grading.
199. Directed Research in Bioengineering. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit with a change in the project. Individual contract required. In- vestment petitions available in Office of Academic and Student Affairs. Letter grading.

Graduate Courses

C201. Engineering Principles for Drug Delivery. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: Mathematics 33B, Physics 1B. Application of engineering principles to delivery of pharmaceuticals. Focus on design and synthesis of synthetic bioconjugates for some sample applications. Concurrently scheduled with course C105. Letter grading.

C206. Topics in Bioelectricity for Bioengineers. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisites: Chemistry 2, 3, Mathematics 33B, Physics 1C. Cov- erage in depth of physical processes associated with biological membranes and channel proteins, with special emphasis on drug delivery. Discussion of fundamental principles governing electrostatics in dielectric media, building on complexity to ultimately address action potentials and signal propagation in nerves. Topics include membrane, Nernst equations, Donnan equilibrium, GKH equations, energy barriers in ion channels, cable equation, action potentials, Hodgkin/Huxley equa- tions, impulse propagation, axon geometry, and conduc- tion, dendritic integration. Concurrently scheduled with course C106. Letter grading.

C207. Polymer Chemistry for Bioengineers. (4) Lecture, four hours; discussion, one hour; outside study, five hours. Enforced requisites: Mathematics 20B, 20L. Fundamental concepts of polymer synthesis, in- cluding step-growth, chain growth (ionic, radical, metal catalyzed), and ring-opening, with focus on fac- tors that can influence polymer properties. Topics include chain length distribution, and chain-end functionality, chain copolymerization, and stereochemistry in polymeriza- tions. Presentation of applications of use of different polymerization techniques such as step-growth, chain-growth, ring-opening, and coordination polym- erization, and effects of synthesis route on polymer properties. Lectures include both theory and practical issues demonstrated through examples. Concurrently sched- uled with course C107. Letter grading.


C215. Biochemical Reaction Engineering. (4) (Same as Chemical Engineering CM215.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: Chemical Engineering 101G. Use of preceding courses of biochemical engineering, biophysics, biochemistry, and chemical engineering as prerequisites. Concepts presented with practical experience. Projects focus on understanding medical networking issues and implementation of basic protocols for healthcare delivery, with emphasis on use of DICOM. Intro- duction to basic tools and methods used within infor- matics. Letter grading. Requisite: course C223A. Integrated with topics presented in courses C223A, M227, and M228 to provide concepts presented with practical experience. Projects focus on medical image manipulation and decision support systems. Letter grading. Requisite: course C223B. Exposure to programming concepts for medical applications, with focus on basic abstraction techniques used to extract meaningful features from medical text and imaging data and visualize results. Integrated with topics presented in courses C224A and M226 to reinforce concepts presented with practical experience. Projects focus on medical image retrieval, knowledge representation, and visualization. Letter grading. Requisite: course C223B. Exposure to programming concepts for medical applications, with focus on basic abstraction techniques used to extract meaningful features from medical text and imaging data and visualize results. Integrated with topics presented in courses C224A and M226 to reinforce concepts presented with practical experience. Projects focus on medical image retrieval, knowledge representation, and visualization. Letter grading.

C224A. Physics and Informatics of Medical Imaging. (4) Lecture, two hours; laboratory, two hours; outside study, eight hours. Requisite: Course 223A. Integrated with topics presented in courses 223A, M227, and M228 to provide concepts presented with practical experience. Projects focus on medical image manipulation and decision support systems. Letter grading. Requisite: course C223C. Letter grading. Requisite: course C223C. Exposure to programming concepts for medical applications, with focus on basic abstraction techniques used to extract meaningful features from medical text and imaging data and visualize results. Integrated with topics presented in courses C224A and M226 to reinforce concepts presented with practical experience. Projects focus on medical image retrieval, knowledge representation, and visualization. Letter grading.
ization of images (e.g., perceptual, presentation). Discussion of more advanced methods now being pursued by researchers. Letter grading.

M225. Bioseparations and Bioprocess Engineering (4) (Same as Chemical Engineering CM225.) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: Chemical Engineering 101C. Separation strategies, unit operations, and economic factors used to design processes for isolating and purifying materials like whole cells, enzymes, and pharmaceuticals. Exemplifies how products are products of biological reactors. Letter grading.

M226. Medical Knowledge Representation. (4) (Same as Information Studies M253.) Seminar, four hours; outside study, eight hours. Designers for graduate students. Issues related to medical knowledge representation and its application in healthcare processes. Topics include data structures used for representing knowledge (data mining, statistical classifiers, and hierarchical classification), and basic information retrieval. Review of work in constructing ontologies, with focus on problems in implementation and definition. Common medical ontologies, coding schemes, and standardized indices/terminologies (SNOMED, UMLS). Letter grading.

M227. Medical Information Infrastructures and Internet Technologies. (4) (Same as Information Studies M254.) Lecture, four hours; outside study, eight hours. Designed for graduate students. Introduction to networking, communications, and information infrastructures in medical environment. Exposure to basic concepts related to networking at several levels: low-level (TCP/IP, services), medium-level (network topologies), and high-level (distributed computing, Web-based services) implementations. Common protocols, communication protocols (FTP, DICOM) and current medical information systems (HIS, RIS, PACS). Advances in networking, such as wireless health systems, peer-to-peer topologies, grid/cloud computing, introduction to security and encryption in networked environments. Letter grading.

M228. Medical Decision Making. (4) (Same as Information Studies M255.) Lecture, four hours; outside study, eight hours. Designed for graduate students. Overview of issues related to medical decision making. Introduction to concept of evidence-based medicine. Overview of key processes related to care and outcomes. Basic probability and statistics to understand research results and evaluations, and algorithmic methods for decision-making processes (Bayesian vs. frequentist, decision trees). Study of hypothesis testing, and estimation. Focus on technical advances in medical decision support systems and expert systems, with review of classic and current research. Introduction to common statistical and decision-making software packages to familiarize students with current tools. Letter grading.

C231. Nanopore Sensing. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requirements: course 100, Life Sciences 2, 3, Physics 1A, 1B, 1C. Analysis of sensors based on measurements of fluctuating ionic conductance through artificial or protein nanopores. Physics of single molecule detection, including electronic parameters, and DNA sequencing. Review of current literature and technological applications. History and instrumentation of resistive pulse sensing, theory and instrumentation of electrical measurements in electrolytes, nanopore fabrication, ionic conductance through pores and GHK equation, patch clamp and single channel measurements and instrumentation, noise in nanopore sensing, molecular detection and DNA sequencing, membrane engineering, and future directions of field. Concurrently scheduled with course C131. Letter grading.

M232A. Biotechnology I: Entrepreneurial Opportunities in Medical Technology. (4) (Same as Management M271A.) Lecture, three hours; outside study, nine hours. Designed for graduate and professional students in engineering, dentistry, design, law, management, and medicine. Focus on understanding how to identify unmet clinical needs, properly filtering through these needs using various acceptance criteria, and selecting promising needs for which potential medical solutions exist. Work in groups to expedite traditional research and development processes to invent and implement new medical devices that increase quality of clinical care and result in improved patient outcomes in hospital system. Introduction to intellectual property basics and various medtech business models. Letter grading.

M232B. Medtech Innovation II: Prototyping and New Venture Development. (4) (Same as Management M271B.) Lecture, three hours; discussion, three hours; outside study, six hours. Enforced requisite: course M233A. Designed for graduate and professional students in engineering, dentistry, design, law, management, and medicine. Development of medtech solutions for unmet clinical needs previously identified in course M232A. Steps necessary to commercialize viable medtech solutions. Exploration of concept selection, business plan development, intellectual property filing, financing strategies, and device prototyping. Letter grading.

C239A. Biomolecular Materials Science I. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Overview of chemical and physical foundations of biomolecular materials science that concern materials aspects of biological and biomedical cell biology, and bioengineering. Understanding of different types of interactions that exist between biomolecules, such as van der Waals interactions, entropically modulated electronic interactions, hydration and solvation interactions, polymer-mediated interactions, depletion interactions, molecular recognition, and others. Illustration of these ideas using examples from bioengineering and biomedical engineering. Students should be able to make simple calculations and estimates that allow them to engage broad spectrum of bioengineering problems, such as those in drug delivery and tissue engineering. May be taken independently for credit. Concurrently scheduled with course C139A. Letter grading.

C239B. Biomolecular Materials Science II. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Course C239A is not required to take C239B. Overview of chemical and physical foundations of biomolecular materials science that concern materials aspects of biological and biomedical cell biology, and bioengineering. Understanding of different basic types of biomolecules, with emphasis on nucleic acids, proteins, and lipids. Study of how biological and biomimetic materials science transforms bio self-assembly and how these structures impart biological function. Illustration of these ideas using examples from bioengineering and biomedical engineering. Case study on current topics, including drug delivery, gene therapy, cancer therapeutics, emerging pathogens, and relation of self-assembly to disease states. May be taken independently for credit. Concurrently scheduled with course C139B. Letter grading.

CM240. Introduction to Biomedical Engineering. (4) (Same as Mechanical Engineering CM240.) Lecture, four hours; discussion, two hours; outside study, eight hours. Requirements: course 110. Introduction to biomechanics, design, and mathematics of systems. Overview of topics including fluid mechanics, transport phenomena, and heat and mass transfer. Introduction to continuum mechanics and their applications to medical devices. Applications of continuum mechanics and their applications to medical devices. Applications of mechanics in cells. Structure of macromolecules, polymers as entropic springs, random walks and diffusion, mecano-sensitive proteins, single-molecule force-extension, DNA packing and transcriptional regulation, lipid bilayer membranes, mechanics of cytokeleton, molecular motors, biophysical aspects of muscle mechanics, pattern formation. Concurrently scheduled with course CM141. Letter grading.

CM245. Molecular Biotechnology for Engineers. (4) (Same as Chemical Engineering CM245.) Lecture, four hours; discussion, one hour; outside study, seven hours. Selected topics in molecular biology that form foundation of biotechnology and biomedical industry. Emphasis on molecular biology, molecular technology, molecular research tools, manipulation of gene expression, directed mutagenesis and protein engineering, DNA-based diagnostics and DNA microarrays, antibody and protein-based diagnostics, genomics and bioinformatics, isolation of human genes, gene therapy, and tissue engineering. Concurrently scheduled with course CM145. Letter grading.


M246. Introduction to Biological Imaging. (4) (Same as Pharmacology M248 and Physics and Biology in Medicine M248.) Lecture, three hours; laboratory, one hour; outside study, seven hours. Exploration of role of biological imaging in modern biology and medicine, including imaging physics, instrumentation, image processing, and applications of imaging for range of modalities. Practical experience provided through series of imaging experiments. Letter grading.

M250B. Microelectromechanical Systems (MEMS) Fabrication. (4) (Same as Electrical Engineering M250B and Mechanical and Aerospace Engineering M282.) Lecture, four hours; outside study, one hour; outside study, eight hours. Enforced requisite: course M153. Advanced discussion of micromachining processes used to construct MEMS. Coverage of many lithography, deposition, etching, and wafer bonding techniques, as well as their combination in process integration. Materials issues such as chemical resistance, corrosion, mechanical properties, and residual/intrinsic stress. Letter grading.

M252. Microelectromechanical Systems (MEMS) Device Physics and Design. (4) (Same as Electrical Engineering M252 and Mechanical and Aerospace Engineering M282.) Lecture, four hours; outside study, two hours. Introduction to MEMS. Design methods, design rules, sensing and actuation mechanisms, microsensors, and microactuators. Designing MEMS to be produced with both foundry and custom processes. Design for MEMS. Design project required. Letter grading.

C255. Fluid-Particle and Fluid-Structure Interactions in Microflows. (4) Lecture, four hours; laboratory, one hour; outside study, seven hours. Enforced requisite: course 110. Introduction to Navier-Stokes equations, assumptions, and simplifications. Analytical framework for calculating simple flows and numerical methods to solve and gain intuition for complex flows. Forces on particles in Stokesslaw, and finite-inertia flows. Flows induced around particles with and without finite inertia and implications for particle-particle interactions. Secondary flows induced by structures and particle-particle interactions. Particle separations by fluid dynamic forces: field-flow fractionation, inertial focusing, structure-induced separa-
tions. Application concepts in internal biological flows and separations for biotechnology. Helps students become sufficiently fluent with fluid mechanics vocabulary and techniques, design and model microfluidic systems to manipulate fluids, cells, and particles, and develop understanding for how fluid and particles behave in arbitrarily structured microchannels over range of Reynolds numbers. Concurrently scheduled with course C155. Letter grading.

M260. Neuroimaging and Biomedical Engineering (Same as Electrical Engineering M255 and Neuroscience M206.) Lecture, four hours; laboratory, three hours; outside study, five hours. Requisites: Mathematics 32A, Physics 18 or 68L. Introduces the fundamental concepts of biophysics and electrical and neural signal recording, processing, and stimulation. Topics include bioelectricity, electrophysiology (action potentials, local field potentials, EEG, ECOG), intracellular and extracellular recording, microelectrode technology, neural signal processing (neural signal frequency bands, filtering, spike detection, spike sorting, stimulus artifact filtration), brain-computer interfaces, deep-brain stimulation, and prosthetics. Letter grading.


M263. Neural Systems and Anatomy. (Same as Neuroscience M205.) Lecture, four hours; discussion/laboratory, two hours. Prior to first laboratory meeting, students must complete Bloodborne Pathogens training course through UCLA Environment, Health, and Safety. Fundamentals of systems neuroscience, with emphasis on integration of cellular, circuit, anatomical, and behavioral analyses aimed at understanding sensorimotor processing, learning, and cognition. Analysis laboratory includes brain dissections.

C270. Energy-Tissue Interactions. (4) Lecture, three hours; outside study, nine hours. Enforced requisites: Life Sciences 2, Physics 1C. Introduction to therapeutic and diagnostic use of energy delivery devices in medical and dental applications, with emphasis on understanding fundamental mechanisms underlying various types of energy-tissue interactions. Concurrently scheduled with course C170. Letter grading.

C270L. Introduction to Techniques in Studying Laser-Tissue Interaction. (2) Laboratory, four hours; outside study, two hours. Corequisites: course C270. Introduction to laser and experimental techniques used in studying laser-tissue interactions. Topics include computer simulations of light propagation in tissue, measuring absorption spectra of tissue/tissue phase, tissue optical properties, detection of optical properties of different tissues, techniques of temperature distribution measurements. Concurrently scheduled with course C170L. Letter grading.


C272. Design of Minimally Invasive Surgical Tools. (4) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisite: Chemistry 30B, Life Sciences 2, 3A. Introduction to design principles and engineering concepts used in design and manufacture of tools for minimally invasive surgery. Coverage of FDA regulatory policy and surgical procedures. Topics include optical devices, endoscopes and laparoscopes, biopsy devices, laparoscopic tools, cardiovascular and interventional radiology devices, orthopedic instrumentation, and integration system design. Examination of complex process of tool design, fabrication, testing, and validation. Preparation of drawings and consideration of development of new and novel devices. Concurrently scheduled with course C172. Letter grading.

CM278. Introduction to Biomaterials. (4) (Same as Materials Science CM280.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: Chemistry 20A, 20B, and 20L, or Materials Science 104. Engineering materials used in medicine and dentistry for repair and/or restoration of damaged natural structures: surface properties, internal and external characteristics, implant biocompatibility, with special focus on translating biomodeling goals and data into mathematical models and implementing them for simulation and analysis. Basics of numerical simulation algorithms for modeling soft and hard tissue and validation. Preparation of drawings and consideration of development of new and novel devices. Concurrently scheduled with course CM178. Letter grading.


C282. Biomaterial Interfaces. (4) Lecture, four hours; laboratory, eight hour course CM178 or CM278. Function, utility, and biocompatibility of biomaterials depend critically on their surface and interfacial properties. Discussion of morphology and composition of biomaterials; mechanical, chemical, and macroscale techniques for characterizing structure and properties of biomaterial interfaces, and methods for designing and fabricating biomaterials with prescribed surface mechanical properties. Letter grading.


M284. Functional Neuroimaging: Techniques and Applications. (3) (Same as Neuroscience M285, Physics and Engineering in Medicine M285, Psychiatry M285, and Psychology M278.) Lecture, three hours. In-depth examination of activation imaging, including fMRI and electrophysiologic methods, data acquisition and analysis, experimental design, and results obtained thus far in human systems. Strong focus on understanding technologies, how to design activation imaging paradigms, and how to interpret results. Laboratory visits and design and implementation of functional MRI experiment. S/U or letter grading.

CM285. Introduction to Tissue Engineering (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisites: Chemistry 20A, 20B, 20L. Tissue engineering applies principles of biology and physical sciences with engineering approach to regenerate tissues and organs. Guiding principles of use of three basic components for tissue engineering: cells, scaffolds, and molecular signals. Concurrently scheduled with course CM185. Letter grading.

CM286. Computational Systems Biology: Modeling and Simulation of Biological Systems. (4) (Same as Computer Science CM286.) Lecture, four hours; laboratory, three hours; outside study, eight hours. Corequisite: Electrical Engineering 102. Dynamic systems, modeling, and computer simulation: methods for studying biological/biomedical processes and systems at multiple levels of organization. Control system, multicompartamental, predator-prey, pharmacokinetic (PK), pharmacodynamic (PD), and other structural modeling methods applied to life science problems at molecular, cellular (biochemical pathways/networks), organ, and organismal levels. Basic computer modeling and data-driven focus on understanding technologies, how to design activation imaging paradigms, and how to interpret results. Laboratory visits and design and implementation of functional MRI experiment. S/U or letter grading.

CM287. Research Communication in Computational and Systems Biology. (Same as Computer Science CM287.) Lecture, four hours; outside study, eight hours. Requisite: course CM286. Closely directed, interactive, and real research experience in active quantitative systems biology research laboratory. Direction on how to focus on topics of current interest in scientific community, appropriate to student interests and capabilities. Critiques of oral presentations and written progress reports explain how to proceed with search for research results. Major emphasis on effective research reporting, both oral and written. Concurrently scheduled with course CM187. Letter grading.

295A-295Z. Seminars: Research Topics in Bioengineering. (2 each) Seminar, two hours; outside study, four hours. Limited to bioengineering graduate students. Advanced study and analysis of current topics in bioengineering. Discussion of current literature in research specialty of faculty member teaching course. Student presentation of projects in research specialty. May be repeated for credit. S/U grading.


M296A. Advanced Modeling Methodology for Dynamic Biomedical Systems. (4) (Same as Computer Science M296A and Medicine M270C.) Lecture, four hours; outside study, eight hours. Requisite: Electrical Engineering 141 or 142 or Mathematics 115A or Mathematical and Aerospace Engineering 171A. Development of dynamic systems modeling methodology for physiological, biomedical, pharmacological, chemical, and related systems. Control system, multicompartamental, noncompartmental, and input/output models, linear and nonlinear. Emphasis on model development, implementation of model in biomedical sciences and other limited data environments. Problem solving in PC laboratory. Letter grading.

M296B. Optimal Parameter Estimation and Experimental Design for Biomedical Systems. (4) (Same as Biomechanics M270, Computer Science M296B, and Medicine M270D.) Lecture, four hours; outside study, eight hours. Requisite: course CM286 or M296A or Biomechanics 220. Estimation methodology and model parameter estimation algorithms for fitting dynamic system models to biomedical data. Model discrimination methods. Theory and algorithms for optimal experimental design and quantifying models, with special focus on optimal sampling schedule design for kinetic models. Exploitation of PC software for model building and optimal experimental design via applications in physiology and pharmacology. Letter grading.

M296C. Advanced Topics and Research in Biomedical Systems Modeling and Computing. (4) (Same as Computer Science M296C and Medicine M270E.) Lecture, four hours; outside study, eight hours. Requisite: course CM296B. Research techniques and experience on special topics involving models, modeling methods, and model/computing in biomedical and medical science through a critique of literature. Research problem searching and formulation. Approaches to solutions. Individual MS- and PhD-level project training. Letter grading.
Scope and Objectives

Bioinformatics is defined broadly as the study of the inherent structure of biological information. It is the marriage of biology and the information sciences. Examples of current bioinformatics research include the analysis of gene and protein sequences to reveal protein evolution and alternative splicing, the development of computational approaches to study and predict protein structure to further understanding of function, the analysis of mass spectrometry data to understand the connectivity between phosphorylation and cancer, the development of computational methods to utilize expression data to reverse engineer gene networks in order to more completely model cellular biology, and the study of population genetics and its connection to human disease.

Graduates in bioinformatics can expect to engage in any combination of research, teaching, clinical service, and consultation. Within universities and research centers there is a growing need for bioinformatics researchers who can analyze new sources of high-throughput experimental data in biology, medicine, and bioengineering. Biotechnology and pharmaceutical companies also seek bioinformatics graduates for applied research on disease—and drug discovery. Medical centers are also increasingly hiring bioinformatics graduates as genomics data become important in medical research and clinical applications.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Bioinformatics Program offers Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Bioinformatics.

Bioinformatics

Graduate Courses

M202. Bioinformatics Interdisciplinary Research Seminar. (4) (Same as Chemistry M226.) Lecture, four hours; discussion, two hours; outside study, eight hours. Enforced requisites: Computer Science M226 and Human Genetics M226. Seminar, to be arranged. Limited to graduate bioengineering students. Preparation for student research and clinical applications. How to select and apply methods from computational and mathematical disciplines to problems in bioinformatics and computational biology; development of novel methodologies. S/U or letter grading.

M226. Machine Learning in Bioinformatics. (4) (Same as Computer Science M226 and Human Genetics M226.) Lecture, four hours; outside study, eight hours. Enforced requisites: Computer Science M226 and Human Genetics M226. Seminar, to be arranged. Limited to graduate bioengineering students. Preparation for student research and clinical applications. How to select and apply methods from computational and mathematical disciplines to problems in bioinformatics and computational biology; development of novel methodologies. S/U or letter grading.

M252. Seminar: Advanced Methods in Computational Biology. (2) (Same as Chemistry M252 and Human Genetics M252.) Seminar, one hour; discussion, one hour. Designed for advanced graduate students. Examination of computational methodology in bioinformatics and computational biology through presentation of current research literature. How to select and apply methods from computational and mathematical disciplines to problems in bioinformatics and computational biology; development of novel methodologies. S/U or letter grading.

M260A. Introduction to Bioinformatics. (4) (Same as Chemistry CM260A, Computer Science CM221, and Human Genetics CM260A.) Lecture, four hours; discussion, two hours. Enforced requisites: Computer Science M226 or Program in Computing 10C with grade of C– or better, and one course from Biostatistics 100A, 110A, Civil Engineering 110, Electrical Engineering 110A, Mathematics 110A, or Statistics 100A. Designed for advanced graduate students. Preparation for student research and clinical applications. How to select and apply methods from computational and mathematical disciplines to problems in bioinformatics and computational biology; development of novel methodologies. S/U or letter grading.
neering 131A, Mathematics 170A, or Statistics 100A. Prior knowledge of biology not required. Designed for engineering students as well as students from biological sciences and medical school. Introduction to bioinformatics and methodologies, with emphasis on concepts and inventing new computational and statistical techniques to analyze biological data. Focus on sequence analysis and alignment algorithms. S/U or letter grading.

M260B. Algorithms in Bioinformatics and Systems Biology. (4) (Same as Chemistry CM268B and Computer Science CM222.) Lecture, four hours; discussion, two hours. Enforced requisites: Computer Science 32 or Program in Computing 10C with grade of C– or better, and one course from Biostatistics 100A, 110A, Civil Engineering 110, Electrical Engineering 131A, Mathematics 170A, or Statistics 100A. Course M260A is not requisite to M260B. Designed for engineering students as well as students from biological sciences and medical school. Development and application of computational approaches to biological questions, with focus on formulating interdisciplinary problems as computational problems and then solving these problems using algorithmic techniques. Computational techniques include those from statistics and computer science. Letter grading.

M265. Computational Methods in Genomics. (4) (Same as Computer Science M225 and Human Genetics M265.) Lecture, two and one half hours; discussion, two and one half hours; outside study, seven hours. Limited to bioinformatics, computer science, human genetics, and molecular biology graduate students. Introduction to computational approaches in bioinformatics, genomics, and computational genomics and preparation for computational interdisciplinary research in genetics and genomics. Topics include genome analysis, regulatory genomics, association analysis, association study design, isolated and admixed populations, population substructure, human structural variation, model organisms, and genomic technologies. Computational techniques and methods include those from statistics and computer science. Letter grading.

M271. Statistical Methods in Computational Biology. (4) (Same as Biomathematics M271 and Statistics M254.) Lecture, three hours; discussion, one hour. Preparation: Probability concepts. Requisite: course M260A or Statistics 100A or 200A. Introduction to statistical methods developed and widely applied in several branches of computational biology, such as gene expression, sequence alignment, motif discovery, comparative genomics, and biological networks, with emphasis on understanding of basic statistical concepts and use of statistical inference to solve biological problems. Letter grading.

296. Seminar: Research Topics in Bioinformatics. (2) Seminar, to be arranged; discussion, three hours. Advanced study and analysis of current research topics in bioinformatics. Discussion of current research and literature in research specialty of faculty member teaching course. May be repeated for credit. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

596. Directed Individual Study or Research in Bioinformatics. (2 to 12) Tutorial, to be arranged. May be repeated for credit. S/U grading.

597. Preparation for MS Comprehensive Examination or PhD Qualifying Examinations. (2 to 12) Tutorial, to be arranged. May be repeated for credit. S/U grading.

598. MS Thesis Research and Writing. (2 to 12) Tutorial, to be arranged. May be repeated for credit. S/U grading.

599. PhD Dissertation Research and Writing. (2 to 12) Tutorial, to be arranged. May be repeated for credit. S/U grading.

BIOLOGICAL CHEMISTRY

David Geffen School of Medicine

310 Biomedical Sciences Research Building
Box 951737
Los Angeles, CA 90095-1737
310-825-4625
http://www.biocchem.ucla.edu

Siavash K. Kurdistani, MD, Chair
Michael F. Carey, PhD, Vice Chair
John J. Colicelli, PhD, Vice Chair

Professors
Utpal Banerjee, PhD
Michael F. Carey, PhD
John J. Colicelli, PhD
Edward M.F. De Robertis, MD, PhD (Norman F. Sprague Professor of Molecular Oncology)
David S. Eisenberg, DPhil (Paul D. Boyer Professor of Molecular Biology and Biochemistry)
Feng Guo, PhD
Reid C. Johnson, PhD
Leonid Kruglyak, PhD
Siavash K. Kurdistani, MD
Joseph A. Loo, PhD
Kelsey C. Martin, MD, PhD
Sanaz Memarzadeh, PhD
Gregory S. Payne, PhD
Kathrin Plath, PhD
Leonard H. Rome, PhD
Ke Shuai, PhD
Gabriel H. Travis, PhD
Alexander M. van der Bliek, PhD
James A. Wohlschlegel, PhD
S. Larry Zipursky, PhD

Professors Emeriti
Robert J. DeLange, PhD
John Edmond, PhD
Peter A. Edwards, PhD
Judith C. Gasson, PhD
Dohn G. Glitz, PhD
Michael Grunstein, PhD
Harvey R. Hershman, PhD (Crump Professor Emeritus of Medical Engineering)
Bruce D. Howard, MD
Kevin McEntee, PhD
David I. Meyer, PhD
Elizabeth F. Neufeld, PhD
Sidney Roberts, PhD
Geraldine A. Weinmaster, PhD
Irving Zabin, PhD
Patrice J. Zamenhof, PhD

Associate Professors
Heather R. Christofk, PhD
Hilary A. Coller, PhD
Alison R. Frank, PhD
Timothy F. Lane, PhD

Assistant Professors
Pascal F. Egea, PhD (Alexander and Renee Kolin Endowed Professor of Molecular Biology and Biophysics)
Jason Earnst, PhD
Weizhe Hong, PhD
Thomas A. Vallim, PhD

Adjunct Professors
Lenore Arab, MSc, PhD
Duilio D. Cascio, PhD

Adjunct Assistant Professors
Lars Dreier, PhD
Michael B. Elowitz, PhD

Scope and Objectives

The biological chemistry graduate program prepares students for careers as independent research scientists and scholars. Laboratory research is the central element. Biological chemistry has grown to include studies of cellular, molecular, and developmental biology; molecular genetics and genetic engineering, and many aspects of the health sciences. The research activities of the department include these areas as well as the classic topics of metabolism, enzymology, and biomolecular structure. Courses and seminar programs are designed to provide students with the necessary background and approach to encourage their continuing growth in these rapidly changing areas of science.

Interaction with other graduate programs provides access to scientists in a variety of related disciplines. Through its primary affiliation with the Geffen School of Medicine, the Department of Biological Chemistry is also involved in the basic education of students who will be physicians, dentists, and other health professionals. Many of these students become involved in laboratory research in the department. In part because of this breadth of experience students find careers in many aspects of basic and applied scientific research and education. The department emphasizes study for the PhD; but candidates for the MS degree may be accepted under special circumstances.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Biological Chemistry offers Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Biological Chemistry. Applicants interested in studying with faculty in the department are encouraged to apply to an appropriate home area in Graduate Programs in Biocience.

Biological Chemistry

Upper-Division Courses

M140. Cancer Cell Biology. (5) (Same as Molecular, Cell, and Developmental Biology M140C.) Lecture, three hours; discussion, one hour. Requisite: Molecular, Cell, and Developmental Biology 165A. Cancer causes and genetics. Effects of cell transformation on cell growth and metabolism. Altered cell cycle, metabolism, and differentiation pathways in cancer cells. Tumor microenvironment contributions to cancer malignancy, including angiogenesis, metastasis, and immune system evasion. Letter grading.

157a. Research Group Seminars: Biological Chemistry. (2) Seminar, two hours. Designed for undergraduate students who are part of research group. Discussion of research methods and current literature in field or of research of faculty members or students. May be repeated for credit. P/NP grading.
199. Directed Research or Senior Project in Biological Chemistry. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper required. May be repeated for maximum of 16 units. Individual contract required. P/NP or letter grading.

Graduate Courses

201A-201B. Biological Chemistry. (5-5) Lecture, five hours. Preparation: organic chemistry. Open to nonmedical students with consent of instructor. Primarily for first-year medical students and runs throughout School of Medicine’s second semester. General biochemistry with emphasis on mammalian systems. Structure, function, and metabolism of major cellular components. To receive credit, both courses must be taken together in same academic year. In Progress (201A) and S/U (201B) grading.

204. Human Biological Chemistry and Nutrition Laboratory. (3) Laboratory, four hours. Open to nonmedical students with consent of instructor. Exhibits illustrating techniques and procedures in medically important topics in biochemistry and nutrition, analysis of experimental results. S/U or letter grading.


220A-220B-220C. Research Laboratory Rotations. (2 to 8 each) Laboratory, two to eight hours. Students arrange apprenticeships in laboratories of one or more departmental faculty members and engage in research project under close faculty direction. Allows students to acquire in-depth laboratory experience in specific research areas and facilitates informed decision on their part in selection of thesis/research adviser. S/U grading.

M229S. Seminar: Current Topics in Bioinformatics. (4) (Same as Computer Science M229S and Human Genetics M229S.) Seminar, four hours; outside study, eight hours. Designed for graduate engineering students as well as students from biological sciences and mathematics. Focus on current topics in bioinformatics, genomics, and computational genetics and preparation for computational interdisciplinary research in genetics and genomics. Topics include metabolic pathway analysis, regulatory genomics, association analysis, association study design, isolated and admixed populations, population substructure, human structural variation, model organisms, and genomic technologies. Computational techniques include those from statistics and computer science. May be repeated for credit with topic change. Letter grading.

M234. Genetic Control of Development. (4) (Same as Molecular, Cell, and Developmental Biology M234.) Lecture, four hours. Topics at forefront of molecular developmental biology, including problems in oogenesis and early embryogenesis, pattern formation, axis determination, nervous system development, cellular morphogenesis, and cell-cell and cell-matrix interactions. S/U or letter grading.

M237. Cellular and Molecular Basis of Disease. (4) (Same as Pathology M237.) Lecture, two hours; laboratory, two hours. Preparation: one course each in molecular biology, cell biology, and biological chemistry. Discussion of key issues in disease mechanisms, with emphasis on experiments leading to understanding of these mechanisms. Identification of important questions still remaining unanswered. Letter grading.

251A-251B-251C. Seminars: Transcriptional Regulation. (2-2-2) Seminar, two hours. Advanced courses on mechanics of transcription in both eukaryotes and prokaryotes intended for students actively working or highly interested in transcription. S/U grading.

M255. Mitochondria in Medicine, Biology, and Chemistry. (1) (Same as Chemistry CM255S.) Seminar, two hours every other week. Open to undergraduate and graduate science majors considering or currently conducting research in areas related to mitochondria. Large number of physiological and pathophysiological processes involve mitochondrial function and dysfunction. Focus on understanding how mitochondria metabolism, form, and function impact health and disease. Physiology and cell biology of healthy and dysfunctional mitochondria critically assessed at subcellular, cellular, tissue, and organismal levels. Topics include in-depth analyses of literature and critical evaluation of experimental design and methods of current research. S/U grading.

M259. Mechanisms of Gene Regulation. (4) (Same as Chemistry CM259.) Lecture, four hours. Preparation: Chemistry 153B. RNA polymerase structures and mechanisms; promoter recognition and transcription cycle; mechanisms of activation; transcriptional regulation; elongation control; Mediator of transcription; chromatin remodeling and modification; epigenetic regulation; cotranscriptional and transcription-coupled RNA processing; impact of transcription on mRNA processing and stability; nuclear export of mRNA. S/U or letter grading.

266A-266B-266C. Seminars: Cell, Stem Cell, and Developmental Biology. (2-2-2) Seminar, two hours. Open to undergraduate students with consent of instructor. Advanced courses in cell, stem cell, and developmental biology intended for graduate students working or rotating in laboratories of new cell and developmental biology home area. S/U grading.

296. Research Seminar Series in Biological Chemistry. (1) Seminar, one hour. Limited to biological chemistry students. Research presentations from second-year through fourth-year graduate students related to their research. Designed to be highly interactive, with time for questions from fellow graduate students, postdoctoral students, and faculty members during and after presentations. May be repeated for credit. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

596. Directed Individual Study and Research. (2 to 12) Tutorial, to be arranged. Individual study for PhD qualifying examinations or MS comprehensive examination. S/U grading.


BIOLOGY

See Ecology and Evolutionary Biology
search is developed individually from the first year on. The master's program adapts to the needs of researchers desiring supplemental biomathematical training.

The Department of Biomathematics welcomes both undergraduate and graduate students in other majors to its courses in modeling, biomedical computing, and statistics. Premedical majors with mathematical/computer interests can receive early guidance toward an MD/PhD program in Biomathematics. The department also provides statistical and biomathematical training in the medical curriculum and post-graduate medical programs.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of Biomathematics offers Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Biomathematics and the Master of Science (MS) degree in Clinical Research.

Biomathematics
Upper-Division Courses
106. Introduction to Cellular Modeling. (4) Lecture, four hours; computer laboratory, two hours. Preparation: some computer programming. Requisite: Mathematics 32A. Designed for upper-division science majors and biomedical graduate students. Introduction to modeling cells and cell systems, including intraacellular biochemical networks, applications to cancer research. How to develop one's own computer models using IMSL mathematics subroutines. P/NP or letter grading.

108. Introduction to Modeling in Neurobiology. (4) Lecture, four hours; computer laboratory, two hours. Preparation: some computer programming. Requisite: Mathematics 32A for upper-division science majors and biomedical graduate students. Survey of wide variety of topics in neurobiological modeling, current neuronal modeling systems. Development of skills to formulate and program one's own studies using IMSL mathematics subroutines. P/NP or letter grading.

160. Introductory Biomathematics for Medical and Biological Research. (4) Lecture, four hours; discussion, 90 minutes. Elementary statistics course that focuses on statistical concepts and critiques literature, with emphasis on clinical research. Output from statistical computer packages discussed in class, but students do not use computer themselves. Topics include descriptive statistics, t-tests, confidence intervals, linear regression and correlation, analysis of variance, nonparametric statistics. Applications to biomedical literature and design of clinical trials. Letter grading.

170B. Statistical and Mathematical Modeling in Medical and Biological Research. (4) Lecture, four hours; discussion, 90 minutes. Second course in biomathematical methods. Topics include randomization methods, intermediate experimental design, contingency table analysis, analysis of variance, multiple linear regression, and methods of classification, model checking, basic mathematical models including compartment models, and statistical computer software. Students have opportunity to design their own experiments and analyze them on computer, and to analyze previously collected data. P/NP or letter grading.

190HA-190HB. Honors Research in Biomathematics. (4-4) Tutorial, to be arranged. Limited to juniors/seniors. Individual research in some aspect of biomathematics designed to acquaint students in depth with mathematical models and computer applications in biology. Must be taken for at least two terms and for at least 8 units. Thesis required. P/NP or letter grading.

197. Individual Studies in Biomathematics. (2 to 4) Tutorial, four hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Credit assigned on the basis of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research in Biomathematics. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required, P/NP or letter grading.

Graduate Courses
200. Research Frontiers in Biomathematics. (2) Lecture, two hours. Series of presentations by faculty members on research frontiers in biomathematics. S/U or letter grading.

201. Deterministic Models in Biology. (4) Lecture, three hours; laboratory, three hours. Preparation: knowledge of linear algebra and differential equations. Examination of conditions under which deterministic approaches can be employed and conditions where they may be expected to fail. Topics include compartmental analysis, enzyme kinetics, physiological control systems, and cellular/animal population models. S/U or letter grading.


203. Stochastic Processes in Biology. (4) Same as Human Genetics M203.) Lecture, four hours. Requisite: Mathematics 170A or equivalent experience in probability. Mathematical description of biological relationships, with particular attention to areas where conditions for deterministic models are inadequate. Examples of stochastic models from genetics, physiology, ecology, and variety of other biological and medical disciplines. Letter grading.

204. Biomedical Data Analysis. (4) Lecture, four hours. Preparation: undergraduate mathematical analysis and linear algebra; familiarity with programing language such as Fortran or C. Modern computational biology relies heavily on finite-dimensional optimization. Survey of theory and numerical methods for discrete and continuous optimization, with applications from genetics, medical imaging, pharmacokinetics, and statistics. S/U or letter grading.


211. Mathematical and Statistical Phylogenetics. (4) Same as Biostatistics M239 and Human Genetics M211.) Lecture, three hours; laboratory, one hour. Preparation: knowledge of basic physical chemistry and ordinary differential equations. Requisite: course 201. Review of basic physical mechanisms and mathematical analyses used in common biological approaches. Topics include cladistics, phylogeography, and molecular evolution, with focus on phylogenetic techniques. Topics include evolutionary tree reconstruction methods, studies of viral evolution, phylogeography, and coalescent approaches. Examples from evolutionary biology and medicine. Laboratory for hands-on computer analysis of sequence data. S/U or letter grading.
212. Nonlinear Dynamics in Biological Systems. (4) Lecture; three hours; discussion, one hour. Required preparation: elementary knowledge of ordinary differential equations, partial differential equations, and computer programming. Mathematical bases of nonlinear dynamical systems and spatial systems, with applications to biological systems. Topics range from bifurcation theory in low dimension to pattern formation in high dimension. Use of biologically important examples to illustrate applications of these dynamics, including gene regulation and protein-protein interaction networks, glycolytic and metabolic oscillations, circadian rhythms, cell cycle controls, intracellular calcium cycling, pattern formation in morphogenesis, and action potential models and electrical wave formation and propagation in nerve and cardiac systems. S/U or letter grading.


230. Computed Tomography: Theory and Applications. (4) (Same as Physics and Biology in Medicine M230.) Lecture, four hours. Computed tomography is three-dimensional imaging technique widely used in radiology and is becoming active research area in biomedicine. Basic principles of computed tomography (CT), various reconstruction algorithms, special characteristics of CT, physics in CT, and various biomedical applications. S/U or letter grading.

231. Statistical Methods for Categorical Data. (4) (Same as Biostatistics M231.) Lecture, two hours; discussion, one hour. Required: Biostatistics 100B or 110B, Statistics 100B. Statistical techniques for analysis of categorical data; discussion and illustration of their applications and limitations. S/U or letter grading.


234. Applied Bayesian Inference. (4) (Same as Biostatistics M234.) Lecture, three hours; laboratory, one hour. Required: Biostatistics 200B or another substantial regression course. Bayesian approach to statistical inference, with emphasis on biomedical applications and concepts rather than mathematical theory. Topics include large sample Bayes inference from likelihoods, noninformative and conjugate priors, empirical Bayes, Bayesian approaches to linear and nonlinear regression, model selection, Bayesian hypothesis testing, and numerical methods. S/U or letter grading.


250. Controversies in Clinical Research. (4) Lecture, one hour; discussion, four hours. Preparation: completion of professional health sciences or M.D. degree. Required of all MS in Clinical Research students. Discussion and analysis of eight published and well-known clinical studies, one invited faculty member, and course director. Development of critical ability to evaluate trial design and pitfalls. S/U or letter grading.

250A-M250B. Methodology in Clinical Research I, II, (4-4) (Same as Medicine M250A-M250B.) Lecture, four hours. Recommended preparation: M.D., PhD, or dental degree. Requisites: courses 170A, 265A. Course M260A is requisite to M260B. Presentation of principles and practices of major disciplines underlying clinical research methodology, such as biostatistics, epidemiology, pharmacokinetics. S/U or letter grading.

250C. Methodology in Clinical Research III. (4) (Same as Medicine M250C.) Discussion, four hours. Recommended preparation: M.D., PhD, or dental degree. Presentation of principles and practices of major disciplines underlying clinical research methodology, such as biostatistics, epidemiology, pharmacokinetics. S/U or letter grading.

251. Responsible Conduct of Research Involving Humans. (2) (Same as Medicine M251.) Lecture, two hours; discussion, two hours. Preparation: completion of one basic course in protection of human research subjects through Collaborative Institutional Training Initiative. Discussion of current issues in responsible conduct of clinical research, including reporting of research basis for authorship, issues in genetic research, principles and practice of research on humans, peer review, professional codes, Research and Education Review Board (IRE), and related topics. S/U or letter grading.

252. Communication of Science. (2) (Same as Psychiatry M252.) Lecture, two hours; discussion, one hour. Preparation: presentation of various types of scientific writings and their good practice. Details of writing scientific articles: methods, results, discussion. Writing of review article. Grant submissions: aims, background, results, design, role of appendices. Communication with lay public. S/U or letter grading.

253. Clinical Pharmacology. (2) (Same as Medicine M253 and Psychiatry M253.) Lecture, two hours. Preparation: completion of professional health sciences degree (M.D., D.D.S., D.N.Sc., or PhD). Overview of principles of clinical pharmacology, especially as they relate to clinical and translational medicine and to advances in contemporary medicine such as targeting, gene therapy, and genomics. Letter grading.

264. Applied Data Collection and Analysis. (4) Lecture, four hours. Preparation of research project development, including protocol development, data collection, quality control, clinical/electronic health record (EHR) data, structuring data for analysis, and data archival. Lectures, in-class practicums using actual studies and datasets, and student presentations. Letter grading.

265A. Data Analysis Strategies I. (4) Lecture, two hours; laboratory, two hours. Preparation: MD or PhD degree. Requisite: course 170A. Designed to provide students with hands-on experience developing and testing hypotheses using various types of databases. Topics include developing testable hypothesis, data management, and analysis strategies and written presentation of findings. Experience with full process of hypothesis generation, data manipulation, variable selection, analysis techniques, and presentation of findings so students are better prepared to complete data analysis, interpretation of results, and written presentation of results (for master's thesis and subsequent articles). Students encouraged to provide their own data. Databases provided for use in completing exercises for those without available data. Letter grading.

266A. Applied Regression Analysis in Medical Sciences. (4) Lecture, three hours; laboratory, one hour. Requisite: course 170A. Proficiency in applied regression analysis, with focus on interpretation of results and performing computation. Primary topics include simple linear regression, multiple regression, regression model selection, analysis of variance, logistic regression, and survival analysis. Letter grading.

266B. Advanced Biostatistics. (4) Lecture, three hours; discussion, one hour. Requisite: course 266A. Coverage of computational methods, such as linear multi-variate methods, such as principal components, factor analysis, cluster analysis, and more contemporary methods, including recursive partitioning and missing data. Multilevel and longitudinal analysis. Letter grading.

M270. Optimal Parameter Estimation and Experiment Design for Biomedical Systems. (4) (Same as Bioengineering M296B, Computer Science M296B, and Medicine M270D.) Lecture, four hours; outside study, eight hours. Requisite: course 220 or Bioengineering CM286 or M296A. Estimation methodology and model parameterization for fitting dynamic system models to biomedical data. Model discrimination methods. Theory and algorithms for designing optimal experiments for developing and quantifying models, with special focus on optimal sampling schedule design for kinetic models. Exploration of PC software for model building and optimal experiment design via applications in physiology and pharmacology. Letter grading.

M271. Statistical Methods in Computational Biology. (4) (Same as Bioinformatics M271 and Statistics M271D.) Lecture, three hours; discussion, one hour. Preparation: elementary probability concepts. Requisite: Biostatistics 100A or 200A. Introduction to statistical methods developed and widely applied in several branches of computational biology, such as gene expression sequence alignment, motif discovery, comparative genomics, and biological networks, with emphasis on understanding of basic statistical concepts and use of statistical inference to solve biological problems. Letter grading.

273. Stochastic Modeling in Molecular Cellular Biophysics. (4) Lecture, three hours; discussion, one hour. Requisite: Mathematics 170A or equivalent experience in probability/low-dimensional physics or physical chemistry. Most molecular systems are large collections of molecules; behavior of such systems is stochastic. Mathematical descriptions of biochemical reactions and with and within, molecular structures, and biological techniques that measure various biological processes. S/U or letter grading.


281. Survival Analysis. (4) (Same as Biostatistics M281.) Lecture, three hours; discussion, one hour. Preparation: biostatistics or statistics. Statistical methods for survival data. S/U or letter grading.

282. Longitudinal Data. (4) (Same as Biostatistics M282.) Lecture, three hours; discussion, one hour. Required: Biostatistics 200B or another substantial regression course. Analysis of continuous responses for which multivariate normal model may be assumed. Students learn how to input longitudinal data, fit model, and how to specify mean and variance of longitudinal response. Advanced topics include introductions to clustered, multivariate, and discrete longitudinal models. S/U or letter grading.

284. Methodology of Clinical Trials. (4) (Same as Biostatistics M284.) Lecture, three hours; discussion, one hour. Requisite: Biostatistics 200B. Introductory material on design and analysis of clinical trials, including adaptive methods for early and late randomized trials. S/U or letter grading.
Biomedical Research

See Physics and Biology in Medicine

Biomedical Research

Interdisciplinary Minor
College of Letters and Science

220B Hershey Hall
Box 957246
Los Angeles, CA 90095-7246
310-825-0237
etumanov@ lifesci.ucla.edu
http://www.biomedresearchminor.ucla.edu

Utpal Banerjee, PhD, Chair

Faculty Committee

Utpal Banerjee, PhD (Biological Chemistry; Molecular, Cell, and Developmental Biology)
Paul H. Barber, PhD (Ecology and Evolutionary Biology)
Michael F. Carey, PhD (Biological Chemistry)
John J. Colicelli, PhD (Biological Chemistry)
Albert J. Courey, PhD (Chemistry and Biochemistry)
Soraya de Chadarevian, PhD (History, Society and Genetics)
Frank A. Lusis, PhD (Molecular, Cell, and Developmental Biology)
Aldons J. Lusis, PhD (Human Genetics; Medicine; Microbiology, Immunology, and Molecular Genetics)
Kelsey C. Marik, MD, PhD (Biological Chemistry; Psychiatry and Biobehavioral Sciences)
Jeffery F. Miller, PhD (Microbiology, Immunology, and Molecular Genetics)
Caius G. Radu, MD (Molecular and Medical Pharmacology)
Stephen T. Smale, PhD (Microbiology, Immunology, and Molecular Genetics)

Scope and Objectives

The Biomedical Research minor is designed to incorporate research into undergraduate science education at UCLA. Applications may be submitted by any UCLA student who meets the admission requirements and has the potential to satisfy the requirements. Students explore the scientific questions and experimental approaches of biomedical research. Faculty members and staff facilitate early placement of students into laboratories on campus for independent research. Students are trained to analyze research literature, present their research in oral and poster formats, and appreciate the ethical, historical, and philosophical issues facing biomedical research.

Undergraduate Study

Biomedical Research Minor

Admission to the Biomedical Research minor is competitive, and application follows completion of Biomedical Research 5HA, 10H, Honors Collegium 70A, Molecular, Cell, and Developmental Biology 30H, or an approved alternative course. Applications (see the minor website) must be submitted no later than the first term of the junior year. Students must be in good academic standing and demonstrate a genuine interest in research. All degree requirements, including the specific requirements for this minor, must be fulfilled within the unit maximum set forth by the College of Letters and Science.

Required Lower-Division Courses (9 units): Biomedical Research 5HB (or an approved alternative course) and Molecular, Cell, and Developmental Biology 60.

Required Upper-Division Courses (24 units): (1) Sixteen units (four courses) of approved laboratory research through either course 198 or 199; (2) one history of science or philosophy of science course selected from History 179A, 179B, 180A, Neurobiology M169, Philosophy 124, 125, 137, or 145; and (3) Biomedical Research 194H and 194I, or the required journal club seminars (such as Chemistry and Biochemistry 193A) for students in the Integrated and Interdisciplinary Undergraduate Research Program, MARC, or UC LEADS.

Students are expected to file a senior research thesis after completion of their 16 research units and must participate in at least one conference in which they present their research. Up to 8 units of research may be applied toward departmental requirements for the major. The research project and thesis may be the same as those for departmental honors.

Transfer credit for any required course is subject to approval. Students with a grade of less than B (3.0) in any minor course or a cumulative grade-point average of less than 3.0 are subject to dismissal from the minor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.

Biomedical Research

Lower-Division Courses

5HA. Biomedical Research: Concepts and Strategies. (4) Lecture, three hours. Designed for freshmen/sophomores. Exploration of scientific concepts and experimental approaches through seminars by UCLA faculty members on their cutting-edge research. Topics may include areas of study such as cancer, stem cells, and infectious disease, as well as more basic research in cell and molecular biology. Letter grading.

5HB. Biomedical Research: Essential Skills and Concepts. (4) Lecture, three hours; discussion, one hour. Requisite: course 5HA. Designed for freshmen/sophomores. Exploration of scientific concepts and experimental approaches through seminars by UCLA faculty members on their cutting-edge research. Topics may include areas of study such as cancer, stem cells, and infectious disease, as well as more basic research in cell and molecular biology. Letter grading.

Upper-Division Courses

100HA-100HB-100HC. Advanced Research in Genes, Genetics, and Genomics. (4-4-4) (Formerly numbered Life Sciences 100HA-100HB-100HC.) Lecture, two hours; laboratory, 10 hours. Requisite: course 101H. Course 100HA is requisite to 100HB, which is requisite to 100HC. Designed for undergraduates who are committed to pursuing research. Advanced research training in genetics, cell and developmental biology, bioinformatics, functional genomics. Techniques include electron microscopy, other light microscopies, immunohistochemistry. Part of Undergraduate Research Consortium in Functional Genomics sponsored by Howard Hughes Medical Institute Professors Program. Letter grading.

193H. Journal Club Seminars: Current Topics in Biomedical Research. (2) Seminar, three hours. Limited to Biomedical Research minor students. Presentation and discussion of recent papers from primary literature in biosciences. Letter grading.

194H. Research Group Seminars: Data Presentation in Biomedical Research. (2) Seminar, three hours. Requisite: course 193H. Limited to Biomedical Research minor students. Presentation of oral presentations based on student laboratory research at UCLA. May be repeated for credit. Letter grading.

199. Directed Biomedical Research. (4) Tutorial, 12 hours. Limited to Biomedical Research minor students. Supervised individual research under guidance of faculty mentor. Culminating report describing progress and signed by student and faculty mentor required. May be repeated for credit. Individual contract required. Letter grading.
**Biostatistics**

Jonathan and Karin Fielding School of Public Health

51-254 Center for Health Sciences
Box 951772
Los Angeles, CA 90095-1772

310-205-5250
biostat@ucla.edu
http://www.biostat.ucla.edu

Sudipto Banerjee, PhD, Chair
Thomas R. Belin, PhD, Vice Chair

Professors
Sudipto Banerjee, PhD
Thomas R. Belin, PhD
Ronald S. Brookmeyer, PhD
William G. Cumberland, PhD
Dorota M. Babrowska, PhD
Robert M. Elashoff, PhD
Stefan Horvath, PhD, ScD
Gang Li, PhD
Honghu Liu, PhD
Christina M. Ramirez, PhD
Janet S. Sinsheimer, PhD
Marc A. Suchard, PhD
Catherine A. Sugar, PhD, in Residence
Robert E. Weiss, PhD
Weng Kee Wong, PhD

**Professors Emeriti**
Abdelmonem A. Aflifi, PhD
Nancy G. Berman, PhD
Potter C. Chang, PhD
Virginia A. Clark, PhD
Frederick J. Dorey, PhD
Donald Guthrie, PhD
Robert L. Jennrich, PhD

**Associate Professors**
Catherine M. Crespi, PhD, in Residence
Grace H.J. Kim, PhD, in Residence
Damilant Senturk, PhD, in Residence
Donatello Teleca, PhD
Hua Zhou, PhD

**Lecturer**
Fei Yu, PhD

**Adjunct Professors**
David Elashoff, PhD
David W. Gjertson, PhD
Martin L. Lee, PhD
James W. Sayre, DrPH

**Adjunct Associate Professor**
Hilary J. Aralis, PhD

**Adjunct Assistant Professor**
Angela P. Presson, PhD

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**Scope and Objectives**

In recent years biostatistics has become one of the most stimulating areas of applied statistics. The field encompasses the methodology and theory of statistics as applied to problems in the life and health sciences. Biostatisticians are trained in the skilled application of statistical methods to the solution of problems encountered in public health and medicine. They collaborate with scientists in nearly every area related to health and have made major contributions to our understanding of AIDS, cancer, genetics, bioinformatics, and immunology, as well as other areas. Further, biostatisticians spend a considerable amount of time developing and evaluating the statistical methodology used in those projects. The Department of Biostatistics offers MS and PhD degrees in Biostatistics and, through the Fielding School of Public Health, the MPH and DrPH degrees with a specialization in biostatistics (see Public Health Schoolwide Programs). All students receive a balanced education, blending theory and practice.

A degree in biostatistics prepares students for work in a wide variety of challenging positions in government, industry, and education. Graduates have found careers involving teaching, research, and consulting in such fields as medicine, public health, life sciences, and survey research. There has always been a strong demand for well-trained biostatisticians; graduates have had little difficulty finding employment well suited to their particular interests.

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**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

**Graduate Degrees**

The Department of Biostatistics offers Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Biostatistics.

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**Biostatistics**

**Upper-Division Courses**

100A. Introduction to Biostatistics. (4) Lecture, three hours; discussion, one hour; laboratory, one hour. Preparation: one biological or physical sciences course, Suitable for juniors/seniors. Students who have completed courses in statistics may enroll only with consent of instructor. Not open for credit to students with credit for course 110A. Introduction to methods and concepts of statistical analysis. Sampling distributions, with special attention to those occurring in biological sciences. Topics include distributions, tests of hypotheses, estimation, types of error, significance and confidence levels, sample size. P/NP or letter grading.

100B. Introduction to Biostatistics. (4) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisite: course 100A. Not open for credit to students with credit for course 110B. Introduction to analysis of variance, linear regression, and correlation analysis. P/NP or letter grading.

197. Individual Studies in Biostatistics. (2 to 4) Tutorial, four hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

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**Graduate Courses**

200A. Methods in Biostatistics A. (4) Lecture, three hours; discussion, one hour; laboratory, one hour. First course in biostatistical methods intended for graduate students in biostatistics to prepare students pursing careers as practicing biostatisticians. Prior knowledge of probability or statistics not assumed. Students should have working knowledge of calculus and be very comfortable with mathematical and algebraic reasoning. Introduction to basic concepts in analysis, presentation of data, and statistical aspects of design of studies. Special emphasis is given to application of statistical methods to public health, medical, biological, and health sciences. Interpretation and communication of statistical findings is stressed.

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**Focus on methodology, applications, and concepts rather than mathematical statistics or probability theory. S/U or letter grading.**


200C. Biostatistics. (4) Lecture, three hours; discussion, one hour; laboratory, one hour. Preferred preparation: courses 200A, 200B, and previous coursework in linear algebra. Designed for students pursuing graduate degrees in biostatistics. Generalized linear models, description, and analysis of discrete data with applications to public health. Students are trained to identify different types of discrete data; use statistical software package STATA to manage, summarize, and analyze data; use appropriate statistical techniques for analyzing public health data using generalized linear models; apply generalized estimating equations for analyzing longitudinal data; and write formal statistical report of data analysis for public health researcher. S/U or letter grading.

201A. Topics in Applied Regression. (4) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisites: courses 100A and 110B, or 110A and 110B. Designed for master’s and doctoral students in fields outside biostatistics. Topics in linear regression and other related methods. When and how to linearly regress in theory and related methods and how to properly interpret results. Heavy emphasis on practical application as opposed to theoretical development. S/U or letter grading.

201B. Topics in Applied Regression. (4) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisite: course 201A. Further studies in multiple linear regression, including applied multiple regression models, regression diagnostics and model assessment, factorial and repeated measure analysis of variance models, nonlinear regression, logistic regression, propensity scores, matching versus stratification, Poison regression, and classification trees. Applications to biomedical and public health scientific problems. Letter grading.

202A. Theoretical Principles of Biostatistics. (4) Lecture, three hours; discussion, one hour. Recommended preparation: two years of calculus and linear algebra. Introduction to main principles of probability, random variables, discrete and continuous distributions, bivariate distributions, and distributions of functions of random variables. Letter grading.

202B. Topics in Estimation. (4) Lecture, three hours; discussion, one hour. Requisite: course 202A. Basic concepts, sufficiency, biasedness, approximation methods in statistics, nonparametric models and estimation methods, maximum likelihood estimation, M-estimation, Bayesian estimation, and hypotheses testing. Letter grading.

203A. Introduction to Data Management and Statistical Computing. (4) Formerly numbered 403A). Lecture, three hours; laboratory, two hours. Prior knowledge of programming not assumed. Coverage of mechanics of converting data from whatever form it may arrive and preparing it for processing by statistical software. Letter grading.

M206. Introduction to Demographic Methods. (4) (Same as Community Health Sciences M208, Economics M208, and Sociology M213A) Lecture, four hours. Preparation: one introductory statistics course. Introduction to methods of demographic analysis. Topics include demographic rates, standardization, decomposition of differences, life tables, survival analysis, cohort analysis, birth interval analysis, decomposition of differences, life tables, survival analysis, cohort analysis, birth interval analysis, decomposition of differences, life tables, survival analysis, cohort analysis, birth interval analysis.

M210. Statistical Methods for Categorical Data. (4) (Same as Biostatistics M210) Lecture, three hours; discussion, one hour. Requisites: courses 100B or 110B, Statistics 100B. Statistical techniques for analyzing categorical data. Uses of goodness of fit, sign, chi-square, Fisher’s exact test, analysis of contingency tables, logit and probit analysis, and analysis of proportion data. Letter grading.

M236. Longitudinal Data. (4) (Same as Biostatistics M238.) Lecture, three hours; laboratory, one hour. Requisite: course 200B or another substantial regression course. Course on techniques for analyzing data with repeated measurements. Emphasis on mixed effects models, including linear mixed models and topics that may include multivariate and longitudinal data, data analysis, and graphical models. Discussion of various methods for exploring, modeling, and other selected topics may include regression, Bayesian estimation in linear models, REML, prediction, and model selection issues. Some data analysis, thanks to STATA provided. Letter grading.

250B. Linear Statistical Models. (4) Lecture, three hours; discussion, one hour. Requisites: courses 200A, 200B, 200C. Theoretical foundation for linear models with applications to different types of problems in biomedical field. Emphasis on statistical theory and understanding of theory of linear models, including linear mixed models and topics that may include model theory and tests for various types of model misspecification, such as heteroscedasticity and outliers. Other selected topics may include ridge regression, Bayesian estimation in linear models, REML, prediction, and model selection issues. Some data analysis, thanks to STATA provided. Letter grading.

251. Multivariate Biostatistics. (4) Lecture, three hours; discussion, one hour. Requisite: course 250A. Multivariate analysis as used in biological and medical situations. Topics from multivariate distributions, component analysis, factor analysis, discriminant analysis, MANOVA, MANCOVA, longitudinal models with random coefficients. S/U or letter grading.


256. Advanced Methods of Mathematical Statistics. (4) Lecture, three hours; laboratory, one hour. Requisites: courses 202A, 202B, 255. Survey of advanced topics in mathematical statistics, with special emphasis on applications to biostatistics. Topics include finite sample and asymptotic criteria in decision theory, basic concepts from empirical processes theory, minimum distance estimation in parametric and nonparametric models, minimax and Bayes procedures, testing hypotheses and confidence procedures, resampling methods. S/U or letter grading.


M272. Theoretical Genetic Modeling. (4) (Same as Biostatistics M238 and Genetics M238.) Lecture, three hours; laboratory, one hour. Requisites: courses 200A, 200B. Preparation: upper-division mathematics (including statistics and probability). Theoretical models in molecular evolution, with emphasis on principles of making statistical inference. Introduction to models for DNA sequence analysis, and molecular phylogeny, S/U or letter grading.


275. Advanced Survival Analysis. (4) Lecture, three hours; discussion, one hour. Requisites: courses 205A, 255. Time-to-event data arise in many fields, such as medicine, reliability theory, demography, sociology, economics, and astronomy. Overview of common stochastic process models and methods for analysis of such data. Examples include continuous-time Markov chain and semi-Markov models, and frailty and copula models. S/U or letter grading.

276. Inferential Techniques that Use Simulation. (4) Lecture, three hours; discussion, one hour. Requisites: Statistics 205A, 205B. Recommended: course 217. Technological and computational techniques for statistical inference that use computer simulation. Topics include bootstrap, multiple imputation, data augmentation, stochastic relaxation, and sampling importance resampling algorithm. S/U or letter grading.


285. Advanced Topics: Recent Developments. (4) Lecture, three hours; discussion, one hour. Advanced topics and developments in biostatistics not covered in Biostatistics M210 through 219 or 270 through 276 or in other courses. Possible topics include time-series analysis, classification procedures, correspondence analysis, etc. S/U or letter grading.

296. Seminar: Research Topics in Biostatistics. (1 to 4) Seminar, two hours. Advanced study and analysis of current topics in biostatistics. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar in teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. Apprentices meet with faculty and other apprentices to discuss both substance of curriculum and appropriate approaches to teaching, learning, and evaluation. May be repeated for credit. S/U grading.

400. Field Studies in Biostatistics. (4) Fieldwork, to be arranged. Field observation and studies in selected community organizations for health promotion or medical care. Students must file field placement and program training documentation on form available from Student Affairs Office. May not be applied toward MS minimum course requirement; 4 units may be applied toward 44-unit minimum total required for M.P.H. degree. Letter grading.


402B. Biostatistical Consulting. (4) Discussion, two hours; laboratory, two hours. Requisite: course 402A. Principles and practices of biostatistical consulting. May be repeated for credit. S/U grading.

M403B. Computer Management and Analysis of Health Data Using SAS. (4) (Same as Epidemiology M403.) Lecture, two hours; laboratory, two hours. Requisites: courses 100A, 100B (100B may be taken concurrently). Introduction to practical issues in management and analysis of health data using SAS program language. Cross-sectional and longitudinal population-based data sets to be used throughout to illustrate current topics in data management and analysis for addressing biomedical and health-related hypotheses. Letter grading.

406. Applied Multivariate Biostatistics. (4) Lecture, three hours; laboratory, one hour. Preparation: at least two upper-division research courses. Requisite: course 100B. Use of multiple regression, principal components, factor analysis, discriminant function analysis, logistic regression, and canonical correlation in biomedical data analysis. S/U (optional only for nondivision majors) or letter grading.

409. Doctoral Statistical Consulting Seminar. (2) Seminar, one hour; laboratory, four hours. Designed for doctoral candidates seeking opportunity to develop or experience and expertise in collaborating with faculty in Schools of Public Health and Medicine. Students meet with investigators and develop design and protocol for data analysis, implement data protocol when data is obtained, and write up study with lead investigators. S/U grading.

410. Statistical Methods in Clinical Trials. (4) Lecture, three hours; discussion, two hours. Requisites: courses 100A, 100B. Design of studies in animals to assess antitumor response; randomization, historical controls, p-values, size of study, and stratification in human experimentation; various types of controls; prognostic factors, survivorship studies, and design of prognostic studies; organization of clinical trials—administration, comparability, protocols, clinical standards, data collection and management. S/U (optional only for nonmajors) or letter grading.


413. Introduction to Pharmaceutical Statistics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 100A, 100B. Exploration of various types of statistical techniques used in pharmaceutical and related industries. Topics include bioassays and other assay techniques (e.g., ELISAs and FACS analysis), quality control techniques, and pharmacokinetic and pharmacodynamic modeling. S/U or letter grading.

414. Principles of Sampling. (4) Lecture, three hours; discussion, one hour. Requisites: course 100B, Epidemiology 100. Statistical aspects of design and implementation of sample surveys. Techniques for analysis of data, including estimates and standard errors. Avoiding improper use of survey data. Letter grading.

495. Teacher Preparation in Biostatistics. (2) Seminar, two hours. Preparation: 18 units of cognate courses in area of specialization. May not be applied toward master's degree minimum total course requirement. May be repeated for credit. S/U grading.

596. Effective Integration of Biostatistical Concepts in Public Health Research. (4) Tutorial, to be arranged. Enforced requisites: courses 110A, 110B, 400, 402A. Students meet weekly with their advisor and also work independently on their proposed projects. Course fosters ability of students to select relevant design and analysis techniques, synthesize knowledge, and apply insights to address public health problems. Oral examination and written report describing how students have used biostatistical methods to assess data from public health study required. May be repeated for credit. S/U grading.

598. Directed Individual Study or Research. (2 to 12) Tutorial, to be arranged. Limited to graduate students. Individual guided studies under direct faculty supervision. Only 4 units may be applied toward any degree course requirements. May be repeated for credit. S/U grading.

597. Preparation for Master's Comprehensive or Doctoral Qualifying Examinations. (2 to 12) Tutorial, to be arranged. Limited to graduate students. May not be applied toward any degree course requirements. May be repeated for credit. S/U grading.

599. Doctoral Dissertation Research. (2 to 12) Tutorial, to be arranged. Limited to graduate students. May not be applied toward any degree course requirements. May be repeated for credit. S/U grading.

CHEMICAL AND BIOMOLECULAR ENGINEERING

Henry Samueli School of Engineering and Applied Science
5531 Boelter Hall
Box 951592
Los Angeles, CA 90095-1592
310-825-2046
chemeng@ucla.edu
http://www.chemeng.ucla.edu

Panagiotis D. Christofides, PhD, Chair
Tatiana Segura, PhD, Vice Chair

Professors
Jane P. Chang, PhD (William Frederick Seyer Professor of Materials Electrochemistry)
Panagiotis D. Christofides, PhD (William D. Van Vorst Professor of Chemical Engineering Education)
Yoram Cohen, PhD
James F. Davis, PhD
Vijay K. Dhir, PhD
James C. Liao, PhD (Ralph M. Parsons Foundation Professor of Chemical Engineering)
Yunfeng Lu, PhD
Vasiliios I. Manousiouthakis, PhD
Harold G. Monbourquette, PhD
Stanley J. Osher, PhD
Philippe Sautet, PhD
Tatiana Segura, PhD
Yi Tang, PhD

Professors Emeriti
Louis J. Ignarro, PhD (Nobel laureate, Jerome J. Beiser Professor Emeritus of Medical Research)
Robert F. Hicks, PhD
Eldon L. Knuth, PhD
Ken Nobe, PhD
Selim M. Senkan, PhD
Vincent L. Vilk, PhD
A.R. Frank Wazzan, PhD, Dean Emeritus

Assistant Professors
Yvonne Y. Chen, PhD
Dante S. Simonetti, PhD
Samanyava Srivastava, PhD

Scope and Objectives
The Department of Chemical and Biomolecular Engineering conducts undergraduate and graduate programs of teaching and research that focus on the areas of biomolecular engineering, systems engineering, and advanced materials processing and span the general themes of energy/environment and nanoeengineering. Aside from the fundamentals of chemical engineering (thermodynamics, transport phenomena, kinetics, reactor engineering and separation processes), particular emphasis is given to metabolic engineering, protein engineering, synthetic biology, bio-nano-technology, biomaterials, air pollution, environmental modeling, pollution prevention, molecular simulation, process systems engineering, membrane science, semiconductor processing, chemical vapor deposition, plasma processing, and polymer engineering.

Students are trained in the fundamental principles of these fields while acquiring sensitivity to society's needs—a crucial combination needed to address the challenge of continued industrial growth and innovation in an era.
of economic, environmental, and energy constraints.

The undergraduate curriculum leads to a BS in Chemical Engineering and includes the standard core curriculum, as well as biomedical engineering, biomolecular engineering, environmental engineering, and semiconductor manufacturing engineering options. The department also offers graduate courses and research leading to MS and PhD degrees. Both graduate and undergraduate programs closely relate teaching and research to important industrial problems.

Undergraduate Study

The chemical engineering program is accredited by the Engineering Accreditation Commission of ABET.

The Chemical Engineering major is a designated capstone major. The capstone project requires students to first work individually and learn how to integrate chemical engineering fundamentals taught in prior required courses; they then work in groups to produce a paper design of a realistic chemical process using appropriate software tools. Graduates should be able to design a chemical or biological system, component, or process that meets technical and economical design objectives, with consideration of environmental, social, and ethical issues, as well as sustainable development goals. In addition, they should be able to apply their knowledge of mathematics, physics, chemistry, biology, and chemical and biological engineering to analysis and design of chemical and biochemical processes and products; function on multidisciplinary teams; identify, formulate, and solve complex chemical and biological engineering problems; and communicate effectively, both orally and in writing.

Chemical Engineering BS

Capstone Major

The chemical engineering curriculum offers a high-quality, professionally oriented education in modern chemical engineering. The biomedical engineering, biomolecular engineering, environmental engineering, and semiconductor manufacturing engineering options provide students with an opportunity for exposure to a subfield of chemical and biomolecular engineering. In all cases, balance is sought between engineering science and practice.

Chemical Engineering Core Option

Preparation for the Major

Required: Chemical Engineering 10; Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL, 30B; Civil and Environmental Engineering M20 or Mechanical and Aerospace Engineering M20; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4AL.

The Major

Required: Chemical Engineering 45, 100, 101A, 101B, 101C, 102A, 102B, 103, 104A, 104B, 106, 107, 109; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; two capstone analysis and design courses (Chemical Engineering 108A, 108B); and two elective courses (8 units) from Chemical Engineering 110, C111, C112, C113, C114, C115, C116, C118, C119, C121, C125, C128, C135, C140.

For information on University and general education requirements, see the College and Schools chapter earlier in this catalog.

Biomedical Engineering Option

Preparation for the Major

Required: Chemical Engineering 10; Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL, 30B; Civil and Environmental Engineering M20 or Mechanical and Aerospace Engineering M20; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4AL.

The Major

Required: Chemical Engineering 45, 100, 101A, 101B, 101C, 102A, 102B, 103, 104A, 104B, 106, 107, 109; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; two capstone analysis and design courses (Chemical Engineering 108A, 108B); and one biomedical elective course (4 units) from Chemical Engineering 111, C121, C124, C125, CM127, C135, or CM145 (another chemical engineering elective may be substituted for one of these with approval of the faculty adviser).

For information on University and general education requirements, see the College and Schools chapter earlier in this catalog.

Biomolecular Engineering Option

Preparation for the Major

Required: Chemical Engineering 10; Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL, 30B; Civil and Environmental Engineering M20 or Mechanical and Aerospace Engineering M20; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4AL.

The Major

Required: Chemical Engineering 45, 100, 101A, 101B, 101C, 102A, 102B, 104A, 104D, 107, 109, C115, C125, CM145; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; two capstone analysis and design courses (Chemical Engineering 108A, 108B) and one biomedical elective course (4 units) from Chemical Engineering 111, C115, 153A, or another chemical engineering elective may be substituted for one of these. With approval of the faculty adviser.

For information on University and general education requirements, see the College and Schools chapter earlier in this catalog.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Chemical and Biomolecular Engineering offers Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Chemical Engineering.

Chemical Engineering

Lower-Division Courses

2. Technology and Environment. (4) Lecture, four hours; outside study, eight hours. Natural and anthropogenic flows of materials at global and regional scales. Case studies of natural cycles include global warming (CO2 cycles), stratospheric ozone depletion (chlorine and ozone cycles), and global nitrogen cycles. Flow of materials in industrial economies com-
10. Introduction to Chemical and Biomolecular Engineering. (4) Lecture, one hour; outside study, two hours. Enforced requisites: course 101A, Physics 1A. Introduction to principles of chemical and biomolecular engineering. Description of how chemical and biomolecular engineering analysis and design skills are applied for creative solution of current technological problems in production of microelectronic devices, design of chemical plants for minimum environmental impact, application of nanotechnology to chemical sensing, and genetic-level design of recombinant microbes for chemical synthesis. Letter grading.

45. Biomolecular Engineering Fundamentals. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: Chemistry 20A, 20L, 30A, 30L. Fundamentals of modern biomolecular engineering. Topics include structure and function of biomolecules, central dogma of molecular biology, cellular information and energy processing, and experimental methods, with strong emphasis on applications in medicine, industry, and bioenergy. Letter grading.

Upper-Division Courses

100. Fundamentals of Chemical and Biomolecular Engineering. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: course 20A, 20L (not enforced), Mathematics 32B (may be taken concurrently), Physics 1A. Introduction to analysis and design of industrial chemical processes. Material and energy balances. Introduction to programming in MATLAB. Letter grading.


101C. Mass Transfer. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: course 101C. Introduction to analysis of mass transfer in systems of interest to chemical engineering practice. Fundamentals of mass species transport. Fick law of diffusion, diffusion in chemically reacting flows, interphase mass transfer, multicomponent systems. Letter grading.

102A. Thermodynamics I. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Introduction to thermodynamics of chemical and biological processes. Work, energy, heat, and first law of thermodynamics. Second law, extremum principles, entropy, and free energy; ideal and real gases, property evaluation; and thermodynamics of flow systems. Application of first and second laws in biological and living organisms. Letter grading.


103. Separation Processes. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: courses 100, 101B. Application of principles of chemical and biomolecular engineering to design and operation of separation processes such as distillation, gas absorption, filtration, and reverse osmosis. Letter grading.

104A. Chemical and Biomolecular Engineering Laboratory I. (4) Lecture, two hours; laboratory, six hours; outside study, four hours. Enforced requisite: course 100. Enforced corequisite: course 101B. Recommanded preparation: Investigation of basic transport phenomena in 10 predetermined experiments, collection of data for statistical analysis and individually written technical reports and group presentations. Design and performance of one original experimental study involving transport, separation, or another aspect of chemical and biomolecular engineering. Basic statistics: mean, standard deviation, confidence limits, comparison of two means and of multiple means, single and multiple variable linear regression, and brief introduction to factorial design of experiments. Oral and poster presentations. Technical writing of technical reports and their oral defense; writing clearly, concisely, and consistently; importance of word choices and punctuation in multicultural engineering environment and of following required formatting guidelines. Letter grading.

104B. Chemical and Biomolecular Engineering Laboratory II. (6) Lecture, four hours; laboratory, eight hours; outside study, four hours; other, two hours. Enforced requisites: courses 101C, 103, 104A. Course consists of individual and small group investigations in thermal engineering unit operations, each of two weeks duration. Students present their results both written and orally. Written report includes sections on theory, experimental procedure, data analysis, and error analysis. Letter grading.

104C. Semiconductor Processing. (3) Lecture, four hours; outside study, five hours. Enforced requisite: course 104CL. Enforced corequisite: course 104A. Basic engineering principles of semiconductor unit operations, including fabrication and characterization of semiconductor devices, investigation of processing steps used to make CMOS devices, including wafer cleaning, oxidation, diffusion, lithography, chemical vapor deposition, plasma etching, metallization, and statistical design of experiments and error analysis. Presentation of experimental results in both written and oral form. Letter grading.

104CL. Semiconductor Processing Laboratory. (3) Laboratory, four hours; outside study, five hours. Enforced requisite: course 101C. Enforced corequisite: course 104C. Lectures emphasize basic engineering principles of semiconductor unit operations, including fabrication and characterization of semiconductor devices, investigation of processing steps used to make CMOS devices, including wafer cleaning, oxidation, diffusion, lithography, chemical vapor deposition, plasma etching, and metallization. Hands-on device testing includes transistors, diodes, and capacitors. Letter grading.

104D. Molecular Biotechnology Laboratory: From Gene to Product. (6) Lecture, two hours; laboratory, eight hours; outside study, eight hours. Enforced requisites: courses 101C, 125. Integration of molecular and engineering concepts in modern biotechnology. Cloning of protein-coding gene into plasmid, transformation of construct into E. coli, production of gene product in bioreactor, downstream processing of bioreactor broth to isolate and characterize of purified protein. Letter grading.

106. Chemical Reaction Engineering. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: courses 100, 101C, 102B. Fundamentals of chemical kinetics and catalysis. Introduction to analysis and design of homogeneous and heterogeneous chemical reactors. Letter grading.

107. Process Dynamics and Control. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: courses 101C, 103 (or C125), 106 (or C151). Principles of dynamics modeling and start-up behavior of chemical engineering processes. Chemical process control elements. Design and applications of chemical process computer control. Letter grading.

108A. Process Economics and Analysis. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: courses 103 (or C125), 104A, 106 (or C115). Integration of chemical engineering fundamentals such as transport phenomena, process synthesis, analysis and design, and reaction engineering and simple economic principles for purpose of designing chemical processes and evaluating alternatives. Letter grading.

108B. Chemical Process Computer-Aided Design and Analysis. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: courses 103 (or C125), 106 (or C115), 108A. Civil and Environmental Engineering M20 (or Mechanical and Aerospace Engineering M20). Introduction to application of some mathematical and computing methods to chemical engineering design problems; use of simulation and optimization; introduction to steady state material and energy balance calculations. Letter grading.

110. Numerical and Mathematical Methods in Chemical and Biological Engineering. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: course 102B. Principles and engineering applications of statistical methods and chemical and biomolecular engineering examples used throughout to illustrate application of these methods. Use of MATLAB as platform (programming environment) to write programs based on numerical methods to solve various problems arising in chemical engineering. Letter grading.

111. Intermediate Engineering Thermodynamics. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 102B. Principles and engineering applications of statistical methods and chemical and biomolecular engineering examples used throughout to illustrate application of these methods. Use of MATLAB as platform (programming environment) to write programs based on numerical methods to solve various problems arising in chemical engineering. Letter grading.


C122. Polymer Processes. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: course 101A, Chemistry 30A. Formation of polymers, criteria for selecting reaction scheme, polymerization techniques, polymer characterization. Mechanical properties and applications of polymers, polymer process engineering. Diffusion in polymeric systems. Polymers in biomedical applications and in microelectronics. Concurrently scheduled with course C212. Letter grading.

113. Air Pollution Engineering. (4) Lecture, four hours; preparation, two hours; outside study, six hours. Enforced requisites: courses 101C, 102B. Integration of environmental engineering techniques, including concentration of atmospheric pollutants, air pollution standards, air pollution sources and control technology, and relationship of air quality to emission sources. Links also pollution to multimedia environmental assessment. Letter grading.

C114. Electrochemical Processes and Corrosion. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: courses 102A, 102B. Principles of electrochemistry and engineering applications to
industrial electrochemical processes and metallic corrosion. Primary emphasis on fundamental approach to analysis of electrochemical and corrosion processes. Specific topics include corrosion of metals and semiconductors, electrochemical metal and semiconductor surface finishing, passivity, electrodeposition, electroleoless deposition, batteries and fuel cells, electrolysies and bioelectrochemical processes. May be concurrently scheduled with course C214. Letter grading.

C115. Biochemical Reaction Engineering. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: course 101C. Use of previously learned concepts of biophysical chemistry, thermodynamics, transport phenomena, and reaction kinetics to develop tools needed for technical design and economic analysis of biological reactors. May be concurrently scheduled with course CM215. Letter grading.


C121. Membrane Science and Technology. (4) Lecture, four hours; laboratory, one hour; outside study, seven hours. Enforced requisites: courses 101A, 101C, 103. Fundamentals of membrane science and technology, with emphasis on separations at micro, nano and molecular/angstrom scale with membranes. Relationship between structure/morphology of dense and porous membranes and their separation characteristics. Use of nanotechnology for design of selective membranes and models of membrane transport (flux and selectivity). Examples provided from various fields/applications, including biotechnology, microelectronics, chemical processes, sensors, and energy systems. Concurrently scheduled with course C221. Letter grading.

C124. Cell Material Interactions. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Required prerequisites: courses 2, 3, 23B, 4AL. Examination of the interaction to design and synthesis of biomaterials for regenerative medicine, in vitro cell culture, and drug delivery. Biological principles of cellular microenvironment and response to foreign materials and surfaces. Biological and engineering principles. Biomaterials for growth factor, and DNA and siRNA delivery as therapeutic and to facilitate tissue regeneration. Use of stem cells for tissue engineering. Concurrently scheduled with course C224. Letter grading.

C125. Bioseparations and Bioprocess Engineering. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced corequisite: course 101C. Selection of separation and purification strategies, unit operations, and economic factors used to design processes for isolating and purifying materials like whole cells, enzymes, food additives, or pharmaceuticals that are products of biological reactors. Concurrently scheduled with course CM225. Letter grading.

CM127. Synthetic Biology for Biofuels. (4) (Same as Chemistry CM127.) Lecture, four hours; discussion, one hour; outside study, seven hours. Required prerequisites: Chemistry 153A, Life Sciences 3, 23L. Engineering microorganisms for complex phenotypes is common goal of metabolic engineering and synthetic biology. Production of advanced biofuels involves designing and constructing novel metabolic networks in cells. Such efforts require profound understanding of biochemistry, protein structure, and biological regulations of gene expression. Tools in bioinformatics, systems biology, and molecular biology. Fundamentals of metabolic biochemistry, protein structure and function, and bioinformatics. Use of systems modeling for metabolic networks to design microorganisms for energy applications. Concurrently scheduled with course CM227. Letter grading.

C128. Hydrogen. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: course 107. Introduction to advanced process control. Topics include (1) Lyapunov stability for autonomous nonlinear systems including converse theorems, (2) input to state stability, interconnected systems, and small gain theorems, (3) design of nonlinear and robust controllers for various classes of systems, and (4) model predictive control of linear and nonlinear systems, (5) advanced methods for tuning of classical controllers, and (6) introduction to control of distributed parameter systems. Concurrently scheduled with course C235. Letter grading.


CM145. Molecular Biotechnology for Engineers. (4) (Same as Bioengineering CM145.) Lecture, four hours; discussion, one hour; outside study, seven hours. Required prerequisites: courses 3, 23L. Selected topics in molecular biology that form foundation of biotechnology and biomedical industry today. Topics include recombinant DNA technology, molecular research tools, manipulation of gene expression, directed mutagenesis and protein engineering, DNA-based diagnostics and DNA microarrays, antibody and protein-based diagnostics, genomics and bioinformatics, regulation of human genes, gene therapy, and tissue engineering. Concurrently scheduled with course CM245. Letter grading.

M153. Introduction to Microscale and Nanoscale Manufacturing (4) (Same as Bioengineering M153, Electrical Engineering M153, and Mechanical and Aerospace Engineering M183B.) Lecture, three hours; laboratory, four hours; outside study, five hours. Enforced prerequisites: courses 1A, 1B, 1C, 4AL, 4BL. Introduction to general manufacturing methods, mechanisms, constraints, and microfabrication and nanofabrication. Focus on concepts, physical understanding, and applications for microfabrication and nanofabrication techniques that have been broadly applied in industry and academia, including various photolithography technologies, physical and chemical deposition methods, physical and chemical etching methods. Hands-on experience for fabricating microstructures and nanостructures in modern cleanroom environment. Letter grading.

188. Special Courses in Chemical Engineering. (4) Seminar, four hours; outside study, eight hours. Special topics in chemical engineering for undergraduate students taught on experimental or temporary basis, such as those taught by resident and visiting faculty members. May be repeated once with credit with topic or instructor change. Letter grading.

194. Research Group Seminars: Chemical Engineering. (4) Seminar, four hours; outside study, eight hours. Enforced prerequisite: course 101B. Directed study, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation of selected topic under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit with school approval. Individual contract required; enrollment petitions available in Office of Academic and Student Affairs. Letter grading.

Graduate Courses

200. Advanced Engineering Thermodynamics. (4) Lecture, four hours; outside study, eight hours. Required prerequisite: course 102B. Phenomenological and statistical thermodynamics of chemical and physical systems with engineering applications. Presentation of role of atoms and molecules in thermal phenomena, including intermolecular forces in interpretation of thermodynamic properties of gases, liquids, solids, and plasmas. Letter grading.

201. Methods of Molecular Simulation. (4) Lecture, four hours; outside study, eight hours. Required prerequisite: course 200 or Chemistry C223A or Physics 215A. Modern simulation techniques for classical molecular systems. Monte Carlo and molecular dynamics in various energies. Applications to liquids, solids, and polymers. Letter grading.


211. Cryogenics and Low-Temperature Processes. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Fundamentals of cryogenics and cryoengineering science pertaining to industrial low-temperature processes. Basic approaches to analysis of cryofluids and envelopes for operation of cryogenic systems; low-temperature behavior of matter, optimization of cryosystems and other special conditions. Concurrently scheduled with course C111. Letter grading.

212. Polymer Processes. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Required courses: course 101A, Chemistry 30A. Formation of polymers, criteria for selecting reaction scheme, polymerization techniques, polymer characterization. Mechanical properties. Rheology of macromolecules, polymer process engineering. Diffusion in polymeric systems. Polymers in biomedical applications and in microelectronics. Concurrently scheduled with course C112. Letter grading.

214. Electrochemical Processes and Corrosion. (4) Lecture, four hours; discussion, one hour; outside study, six hours. Required prerequisites: courses 102A, 102B (or Materials Science 130). Fundamentals of electrochemistry and engineering applications to industrial electrochemical processes and metallic corrosion. Emphasis on fundamentals approach to analysis of electrochemical and corrosion processes. Specific topics include corrosion of metals and semiconductors, electrochemical metal and semiconductor surface finishing, passivity, electrodeposition, electroleoless deposition, batteries and fuel cells, electrolysies and bioelectrochemical processes. May be concurrently scheduled with course C114. Letter grading.
C215. Biochemical Reaction Engineering. (4) (Same as Bioengineering ME215.) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: course 101C. Use of previously learned concepts of biological chemistry, thermodynamics, transport phenomena, and reaction kinetics to develop tools needed for technical design and economic analysis of biological reactors. May be concurrently scheduled with course C115. Letter grading.

C216. Surface and Interface Engineering. (4) Lecture, four hours; discussion, one hour; outside study, eight hours. Enforced requisite: Chemistry 113A. Introduction to surfaces and interfaces of engineering materials; structure and properties of solid-state electronic devices. Topics include classification of crystals and surfaces, analysis of structure and composition of crystals and their surfaces and interfaces. Examination of engineering applications, including catalytic surfaces, interfaces in microelectronics, and solid-state laser. May be concurrently scheduled with course C116. Letter grading.

217. Electrochemical Engineering. (4) Lecture, four hours; outside study, eight hours. Requisite: course C114. Transport phenomena in electrochemical systems; relationships between molecular transport, convection, and electrode kinetics, along with applications of electrochemistry, fuel cell design, and modern battery technology. Letter grading.


220. Advanced Mass Transfer. (4) Lecture, four hours; outside study, eight hours. Requisite: course 101C. Advanced treatment of mass transfer, with applications to industrial separation processes, gas cleanup, chemical engineering, coal liquefaction, and reactor design; molecular and constitutive theories of diffusion, interfacial transport, membrane transport, convective mass transfer, concentration boundary layers, turbulent transport. Letter grading.

C221. Membrane Science and Technology. (4) Lecture, four hours; discussion, one hour; outside study; seven hours. Enforced requisites: courses 101A, 101C, 103. Fundamentals of membrane science and technology, with emphasis on separations at micro, nano, and molecular/angstrom scale with membranes. Relationship between structure/morphology of dense and porous membranes and their separation characteristics. Use of nanotechnology for design of selective membranes and models of membrane transport (flux and selectivity). Examples provided from various fields/applications, including biotechnology, nanoelectronics, chemical processes, sensors, and biomedical devices. Concurrently scheduled with course C121. Letter grading.


C223. Design for Environment. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 222A. Introduction to design and synthesis of biomaterials for regeneration and designing novel medical devices, and modern battery technology. Letter grading.

C224. Cell Material Interactions. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Life Sciences 2, 3, 23L. Introduction to design and synthesis of biomaterials for regeneration and constructing novel medical devices, and modern battery technology. Letter grading.

CM225. Bioseparations and Bioprocess Engineering. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced corequisite: course 101C. Separation strategies, unit operations, and economic factors used for purifying materials like whole cells, enzymes, food additives, or pharmaceuticals that are products of biological reactors. Concurrently scheduled with course C125. Letter grading.

CM227. Synthetic Biology for Biofuels. (4) (Same as Chemistry CM227.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Chemistry 153A, Life Sciences 3, 23L. Engineering microorganisms for complex phenotype is common goal of metabolic engineering and synthetic biology. Production of advanced biofuels involves designing and constructing novel metabolic networks in cells. Such efforts require profound understanding of biochemistry, protein structure, and biological regulations and are aided by tools in bioinformatics, systems biology, and synthetic biology. Fundamentals of metabolic biochemistry, protein structure and function, and bioinformatics. Use of systems modeling for metabolic networks to design microorganisms for energy applications. Concurrently scheduled with course CM127. S/U or letter grading.

C228. Hydrogen. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: Chemistry 20A. Electronic, physical, and chemical properties of hydrogen. Various methods of production, including production through methane steam reforming, electrolysis, and thermochemical cycles. Description in depth of several uses of hydrogen, including hydrogen storage in fuel cells. Concurrently scheduled with course C128. Letter grading.


C231. Molecular Dynamics. (4) Lecture, four hours; outside study, eight hours. Requisite: course 106 or 110. Analysis and design of molecular-beam systems. Molecular-beam sampling of reactive mixtures in combustion, expansions, or gas jets. Molecular-beam studies of gas-surface interactions, including energy accommodations and heterogeneous reactions. Applications to air pollution control and to catalysis. Letter grading.


233. Frontiers in Biotechnology. (2) Lecture, one hour. Requisite: Life Sciences 3. Integration of science and business in biotechnology. Academic research leading to licencing of companies that turn research breakthroughs into marketable products. Invited lecturers from academia and industry cover emerging areas of biotechnology from basic science, engineering, and business points of view. S/U or letter grading.

234. Plasma Chemistry and Engineering. (4) Lecture, four hours; outside study, eight hours. Designed for graduate chemistry or engineering students. Applications of chemistry, physics, and engineering principles to design and operation of plasma and ion-beam reactors used in etching, deposition, oxidation, and cleaning of materials. Examination of atomic, molecular, and ionic phenomena in plasma and ion-beam processing of semiconductors, etc. Letter grading.

C235. Advanced Process Control. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: course 107. Introduction to advanced process control. Topics include (1) Lyapunov stability for autonomous nonlinear systems including converse theorems, (2) input to state stability, interconnected systems, and small gain theorems, (3) design of nonlinear and robust controllers for various classes of nonlinear systems, (4) model predictive control of linear and nonlinear systems, (5) advanced methods for tuning of systems and (6) introduction to control of distributed parameter systems. Concurrently scheduled with course C135. Letter grading.

236. Chemical Vapor Deposition. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 210, C216. Chemical vapor deposition is widely used to deposit thin films that comprise microelectronic devices. Topics include reactor design, transport phenomena, gas and surface chemical kinetics, structure and composition of deposited films, and relationship between process conditions and film properties. Letter grading.


CM245. Molecular Biotechnology for Engineers. (4) (Same as Bioengineering CM245.) Lecture, four hours; discussion, one hour; outside study, seven hours. Selected topics that form foundation of biotechnology and biomedical industry today. Topics include recombinant DNA technology, molecular research tools, manipulation of gene expression, reverse genetics, DNA and protein engineering, DNA-based diagnostics and DNA microarrays, antibody and protein-based diagnostics, genomics and bioinformatics, isolation of human genes, genomes, and tissues. Letter grading. Concurrently scheduled with course CM145. Letter grading.

246. Systems Biology: Intracellular Network Identification and Analysis. (4) Lecture, four hours; outside study, eight hours. Requisites: course CM245, Life Sciences 1, 2, 3, 4, 23L. Mathematics 31A, 31B, 32A, 33B. Systems approach to intracellular network identification and analysis. Transcriptional regulatory networks, protein networks, and metabolic networks. Data from genome sequencing, large-scale expression analysis, and other high-throughput techniques

250. Computer-Aided Chemical Process Design. (4) Lecture, four hours; outside study, eight hours. Requisites: Petrol. Application of optimization methods in chemical process design; computer aids in process engineering; process modeling; systematic flowsheet invention; process synthesis; optimal design and operation of large-scale chemical processing systems. Letter grading.


270. Principles of Reaction and Transport Phenomena. (4) Lecture; four hours; laboratory, eight hours. Fundamentals in transport phenomena, chemical reaction kinetics, and thermodynamics at molecular level. Topics include Boltzmann equation, microscopic chemical kinetics, transition state theory, and statistical analysis. Examination of engineering applications related to state-of-art research areas in chemical engineering. Letter grading.

270R. Advanced Research in Semiconductor Manufacturing. (6) Laboratory; nine hours; outside study, nine hours. Limited to graduate chemical engineering students in MS semiconductor manufacturing option. Supervised research in processing semiconductor materials and devices. Letter grading.

M280A. Linear Dynamic Systems. (4) Same as Electrical Engineering M262A and Aerospace Engineering M270A.) Lecture; four hours; outside study, eight hours. Requisites: Electrical Engineering 171A. Stochastic description of linear time-invariant (LTI) and time-varying (LTV) systems in continuous and discrete time. Linear algebra concepts such as eigenvalues and eigenvectors, singular values, Jordan form; solution of state equations; stability, controllability, observability, realizability, and minimality. Stabilization design via state feedback and observers; separation principle. Connections with transfer function technique. Letter grading.

M280C. Optimal Control. (4) Same as Electrical Engineering M240C and Mechanical and Aerospace Engineering M270C.) Lecture; four hours; outside study, eight hours. Requisites: Electrical Engineering 240B or Mechanical and Aerospace Engineering 270B. Application of variational methods, Pontryagin maximum principle, necessary and sufficient conditions, optimal control. (Computer/numerical programming) to optimal control of dynamic systems modeled by nonlinear ordinary differential equations. Letter grading.


283C. Analysis and Control of Infinite Dimensional Systems. (4) Lecture; four hours; outside study, eight hours. Requisites: courses M280A, M282A. Designed for graduate students. Introduction to advanced dynamical analysis and controller synthesis methods for nonlinear infinite dimensional systems. Topics include (1) linear operator and stability theory (basic results on Banach and Hilbert spaces, semigroup theory, convergence theory in function spaces), (2) nonlinear models for reduction and nonlinear models for distributed parameter systems, method, proper orthogonal decomposition, (3) non-linear and robust control of nonlinear hyperbolic and parabolic partial differential equations (PDEs), (4) applications to transport-reaction processes. Letter grading.


290. Special Topics. (2 to 4) Seminar, four hours. Requisites for each offering announced in advance by department. Advanced and current study of one or more aspects of chemical engineering, such as chemical process dynamics and control, fuel cells and batteries, membrane transport, advanced chemical engineering analysis, polymers, optimization in chemical process theory. May be repeated for credit with topic change. Letter grading.

M297. Seminar: Systems, Dynamics, and Control Topics. (2) Same as Electrical Engineering M248S and Mechanical and Aerospace Engineering M299A.) Seminar, two hours; outside study, six hours. Limited to graduate engineering students. Presentations of research topics by leading academic researchers from fields of systems, dynamics, and control. Students who work in these fields present their papers and results. S/U grading.

298A-2982. Research Seminars. (2 to 4 each) Seminar, to be arranged. Requisites for each offering announced in advance by department. Lectures, discussions, student presentations, and projects in areas of current interest. May be repeated for credit. S/U grading.

299. Departmental Seminar. (2) Seminar, two hours; outside study, four hours; one-day intensive training at beginning of Fall Quarter. Limited to graduate chemical engineering students. Required of all new teaching assistants. Special seminar on communicating chemical engineering principles, concepts, and methods; teaching assistant preparation, organization, and presentation of material, including use of grading, advising, and rapport with students. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow; Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495A. Teaching Assistant Training Seminar. (2) Seminar, two hours; outside study, four hours; one-day intensive training at beginning of Fall Quarter. Limited to graduate chemical engineering students. Designed for teaching assistants interested in learning about effective use of technology and ways to incorporate that technology into their classrooms for benefit of student learning. S/U grading.

495B. Teaching with Technology for Teaching Assistants. (2) Seminar, two hours; outside study, four hours. Limited to graduate chemical engineering students. Designed for teaching assistants interested in learning about effective use of technology and ways to incorporate that technology into their classrooms for benefit of student learning. S/U grading.

596. Directed Individual or Tutorial Studies. (2 to 8) Tutorial, to be arranged. Limited to graduate chemical engineering students. Petition forms to request enrollment may be obtained from assistant dean, Graduate Studies. Supervised investigation of advanced technical problems. S/U grading.
Options
The Major

Required: Chemistry and Biochemistry 110A, 110B, 113A, C113B, 114 (or 114H), 153A, 171, 172; one additional upper-division chemistry, electrical engineering, or physics laboratory course; and three elective upper-division or graduate courses approved by the physical chemistry adviser. Refer to the Undergraduate Advising Office website for a list of approved electives.

By the junior year, students are strongly encouraged to join a research group within the physical chemistry division to obtain firsthand experience with state-of-the-art physical chemistry research.

Biochemistry BS

The Biochemistry major is for students preparing for careers in biochemistry or other fields requiring extensive preparation in both chemistry and biology.

Preparation for the Major

Required: Chemistry and Biochemistry 20A (or 20AH), 20B (or 20BH), 20L, 30A, 30AL, 30B, 30BL, 30C; Mathematics 31A, 31B, 32A (32A strongly recommended); Physics 1A, 1B, and 1C (or 1AH, 1BH, and 1CH) and 4BL, or 5A, 5B, and 5C.

Students must also complete one of two life sciences sequences—either Life Sciences 2, 3, 5B, and 5C; or 4, and 23L OR 7A, 7B, 7C, and 23L. They may not substitute courses in either sequence.

The Major

Required: Chemistry and Biochemistry 110A, 113A, 153B, 153C, 153L, 154, 156; one additional upper-division or graduate course in chemistry and biochemistry; and three elective upper-division or graduate courses (12 units) approved by the undergraduate adviser (Microbiology, Immunology, and Molecular Genetics 101 highly recommended). Refer to the Undergraduate Advising Office website for a list of approved electives.

General Chemistry BS

The General Chemistry major is for students who wish to acquire considerable chemical background in preparation for careers outside chemistry. The requirements are accordingly quite flexible. The major may be appropriate for some students who plan to enter professional schools, such as those of pharmacy, dentistry, or public health. This major cannot be taken as part of a double major. Students must declare the major before reaching 135 units.

Preparation for the Major

Required: Chemistry and Biochemistry 20A (or 20AH), 20B (or 20BH), 20L, 30A, 30AL, 30B, 30BL, 30C, 30CL; Mathematics 31A, 31B, 32A, 32B, 33B; Physics 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), 4BL.

Students must complete the preparation courses with at least a 2.0 grade-point average.

The Major

Required: Chemistry and Biochemistry 110A, 135A, 153L, 171; three additional upper-division courses in the department (at least one must be a laboratory course); six additional upper-division courses. A 2.0 grade-point average is required in all upper-division courses in the department. Acceptance into the major is based on an original written proposal that is coherent in terms of student interests and objectives. The proposal should specify which courses students plan to apply toward the major and requires the approval of the faculty adviser.

Chemistry/Materials Science BS

The Chemistry/Materials Science major is designed for students who are interested in chemistry with an emphasis on material properties and provides students the opportunity to gain expertise in both chemistry and the science and engineering in materials such as semiconductors, photonic materials, polymers, biomaterials, ceramics, and nano-scale structures. Students explore the reactivity of such materials in different environments and gain understanding of how chemical compositions affect properties. The major provides appropriate preparation for graduate studies in many fields emphasizing interdisciplinary research, including chemistry, engineering, and applied science.

Preparation for the Major

Required: Chemistry and Biochemistry 20A (or 20AH), 20B (or 20BH), 20L, 30A, 30AL, Mathematics 31A, 31B, 32A, 32B, 33B, Physics 1A, 1B, 1C, 4BL.

The Major

Required: Chemistry and Biochemistry 110A, 115A, 171, 172 or C172 or C178, 185; 4 units from 110B, C113B, 172, C174, C175, C176, C180, C181; Materials Science and Engineering 104, 110L, 110L, 120, 121 or 150 or 160, 131, 8 units from 111, 121, 122, 132, 150, 160, 162, CM180; 7 laboratory units from Chemistry and Biochemistry 114, 184, Materials Science and Engineering 121L, 131L, 161L.

The following courses may be applied only once toward the major: Chemistry and Biochemistry 172, C180, C181, Materials Science and Engineering 121, 150, 160.

Organic Materials Concentration

Preparation for the Major

Required: Chemistry and Biochemistry 20A (or 20AH), 20B (or 20BH), 20L, 30A, 30AL, 30B, 30BL, 30C, 30CL; Mathematics 31A, 31B, 32A, 32B, 33B; Physics 1A, 1B, 1C, 4BL.

The Major

Required: Chemistry and Biochemistry 110A, 115A, 136, 171, 185; 4 units from 110B, C113B, 143A, 144, C143A, C174, C175, C176, C180, C181; Materials Science and Engineering 104, 110L, 110L, 120, 150, 4 units from 111, 121, 122, 131L, 132, 160, 162, CM180; 7 laboratory units from Chemistry and Biochemistry 114, 184, Materials Science and Engineering 121L, 131L, 161L.

Honors Program

Admission

The honors program provides exceptional preparation Chemistry and Biochemistry Department majors with the opportunity to do research culminating in an honors thesis. Junior and senior majors who have completed all university-level coursework, including all preparation courses and requirements for the major, with an overall grade-point average of 3.0 or better and a 3.5 GPA or better in the required major courses, may apply for admission. Students must have the sponsorship of an approved faculty adviser.

For further information and application forms, students should contact the Undergraduate Advising Office, 4006 Young Hall, early in their educational planning. Completed applications must be submitted at least two weeks prior to the term in which students plan to begin the honors program.

Requirements

The core of the program consists of at least one approved undergraduate seminar course from Chemistry and Biochemistry 193A or 193B and three research courses (12 units minimum) from 196A, 196B, or 197, culminating in a thesis.

To qualify for graduation with departmental honors, students must satisfactorily complete all requirements for the honors program and the major and obtain a cumulative grade-point average of 3.5 or better in coursework required for the major. On recommendation of the faculty sponsor, and with the approval of the thesis by the departmental honors committee, students are awarded no honors, honors, or highest honors.

Students who have a grade-point average of 3.6 or better, both overall and in the major, and demonstrated exceptional accomplishment on the research thesis are awarded highest honors at the discretion of the departmental honors committee.

Computing Specialization

Majors in Chemistry and Biochemistry may select a specialization in Computing by (1) satisfying all the requirements for a bachelor’s degree in the specified major, (2) completing Program in Computing 10A, 10B, and one course from 10C, 15, 20A, 30, or 60, and (3) completing two computational chemistry courses from Chemistry and Biochemistry C126A, C145, CM160A. Courses need to be completed with a combined grade-point average of at least 2.0. Students must petition for admission to the program and are advised to do so after they complete Program in Computing 10B (petitions should be filed in the Undergraduate Office). Students graduate with a bachelor’s degree in their major and a specialization in Computing.
Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Chemistry and Biochemistry offers Master of Science (MS), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Chemistry and Master of Science (MS), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Biochemistry, Molecular and Structural Biology.

Chemistry and Biochemistry

Lower-Division Courses

2. Introductory Chemistry. (4) Lecture, two hours; discussion, two hours. Not open to students with credit for course 14A or 20A. Concept of submicroscopic world of chemistry, ranging from protons to proteins in subject matter. P/NP or letter grading.

7. Nanoscience and Nanotechnology Laboratory. (2) Seminar, discussion, and laboratory, 32 hours. Limited to high school students. Key concepts of nanoscience and nanotechnology, including various approaches to nanofabrication (bottom-up and top-down). Fabrication of nanostructures and devices, collection of scientific data using those devices, analysis of data, and writing the student results. Offered in summer only, P/NP grading.

14A. Atomic and Molecular Structure, Equilibria, Acids, and Bases. (4) Lecture, three hours; discussion, one hour. Preparation: high school chemistry or equivalent background and three and one half years of high school mathematics. Enforced corequisite: Life Sciences 30A or Mathematics 3A or 31A or score of 35 or better on Mathematics Diagnostic Test. Not open to students with credit for course 20A. Introduction to physical and general chemistry principles; atomic structure based on quantum mechanics; atomic orbitals and periodic table; chemical bonding (Lewis structures, VSEPR theory, hybridization, and molecular orbital theory); gaseous and aqueous equilibria; properties of inorganic and organic acids, bases, buffers, titrations. P/NP or letter grading.

14B. Thermodynamics, Electrochemistry, Kinetics, and Organic Chemistry. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 14A with grade of C– or better. Enforced requisite or corequisite: Life Sciences 30B or Mathematics 3B or 31B with grade of C– or better. Not open to students with credit for course 20A, 20B, or 30A. Phase changes; thermodynamics: first, second, and third laws of thermodynamics; free energy changes; electrochemistry and its role as energy source; chemical kinetics, including catalysis, reaction mechanisms, and enzymes; coordination compounds; general classes and naming of organic molecules; structure, conformations, and relative energies of organic molecules; application of thermodynamics and kinetics to organic and biochemical reactions; use of molecular modeling software to illustrate molecular structures and their relative energies. P/NP or letter grading.

14BL. General and Organic Chemistry Laboratory I. (3) Lecture, three hours; laboratory, three hours. Enforced requisite: course 14A with grade of C– or better. Enforced corequisite: course 14B. Not open to students with credit for course 20L. Introduction to volumetric, spectrophotometric, and potentiometric analysis. Use and preparation of buffers and pH meters. Synthesis and kinetic techniques using compounds of interest to students in life sciences. P/NP or letter grading.

14C. Structure of Organic Molecules. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 14B with grade of C– or better. Not open to students with grade of B+ or better. Continues chemical studies in structure of organic molecules, with emphasis on biological applications. Resonance, stereochemistry, conjugation, and aromaticity; spectros- copy (UV, IR, NMR, MS, mass spectrometry); introduction to effects of structure on physical and chemical properties; survey of biomolecular structure. P/NP or letter grading.

14CL. General and Organic Chemistry Laboratory II. (4) Lecture, one hour; laboratory, six hours. Enforced requisite: courses 14B and 14BL, with grades of C– or better. Improved corequisite: course 14C, Synthesis and analysis of compounds; purification by column chromatography, crystallization, and sublimation; characterization by mass spectrometry, UV, NMR, and IR spectroscopy, optical activity, electrochemistry, pH titration. P/NP or letter grading.

14D. Organic Reactions and Pharmaceuticals. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 14C with grade of C– or better. Organic reactions, nucleophilic and electrophilic substi- tutions and acid-base reactions; aromatic substitutions, carboxylic reactions, catalysis, molecular basis of drug action, and organic chemistry of pharmaceuticals. P/NP or letter grading.

17. Chemical Principles. (4) Lecture, three hours; discussion, one hour. Introduction to chemical principles: numbers, measurements, chemical calculations, laws, solutions, acids, bases, and salts, molecular structure, and nomenclature. Collaborative learning and problem solving; introduction to chemistry laboratory practice. P/NP or letter grading.

20A. Chemical Structure. (4) Lecture, three hours; discussion, one hour. Preparation: high school chem- istry or equivalent background and three and one half years of high school mathematics. Recommended preparation: high school physics. Enforced corequi- site: Mathematics 31A. First term of general chemistry. Survey of chemical processes, quantum chem- istry, atomic and molecular structure and bonding, and spectroscopy. P/NP or letter grading.

20AH. Chemical Structure (Honors). (4) Lecture, three hours; discussion, one hour. Preparation: high school chemistry or equivalent background. High school physics, and three and one half years of high school mathematics. Enforced corequisite: Mathe- matics 31A. Honors course parallel to course 20A. P/NP or letter grading.

20B. Chemical Energetics and Change. (4) Lecture, three hours; discussion, one hour. Enforced requi- sites: course 20A or 20AH, and Mathematics 31A, with grades of C– or better. Enforced corequisite: Mathematics 31B. Second term of general chemistry. Intermolecular forces and organization, phase be- havior, chemical thermodynamics, solutions, equilibria, reaction rates and laws. P/NP or letter grading.

20BH. Chemical Energetics and Change (Honors). (4) Lecture, three hours; discussion, one hour. En- forced requisites: course 20A and Mathematics 31A with grades of B+ or better or 20AH with grade of B or better. Enforced corequisite: Mathematics 31B. Honors course parallel to course 20B. Letter grading.

20L. General Chemistry Laboratory. (3) Lecture, one hour; laboratory, three hours. Enforced requisite: course 20A with grade of C– or better. Enforced corequisite: course 20L. Preparation: courses 14B and 14BL, with grade of C– or better. Use of balance, volumetric techniques, or laboratory, two hours. Limited to freshmen/sophomores. General introduction to frontiers of molecular sciences or in- tensive exploration of particular theme or topic. Con- sult Schedule of Classes for topics and instructors. P/NP or letter grading.

88A. Serendipity in Science. (2) Seminar, two hours. Limited to 20 freshmen. Inquiry into unexpected dis- coveries in science that have had significant impact on society and analysis of circumstances that brought these about, beginning with discovery of helium in sun by Janssen in 1868 (using newly developed field of spectroscopy). Discovery of X rays by Röntgen in 1895 and of radioactivity by Becquerel in 1896. Other topics include discoveries important to medicine, such as penicillin by Fleming in 1928 and cis-platin by Rosenberg in 1969. P/NP or letter grading.

96. Special Courses in Chemistry. (1 to 4) Lecture, to be arranged. May be repurchased as many times as necessary for students majoring in chemistry and biochemistry for life sciences majors. Limited to Program for Excellence in Education and Research in Science (PEERS) students. Develop-
ment of intuition and problem-solving skills in collaborative learning environment. May be repeated four times, but only 1 unit may be applied toward graduation. P/NP grading.

98XB. PEERS Collaborative Learning Workshops for Physical Engineering Majors. (2) Lecture, three hours. Corequisite: associated undergraduate lecture course in chemistry and biochemistry for physical sciences and engineering majors. Limited to Program for Excellence in Education in Science and Research in Science (PEERS) students. Development of intuition and problem-solving skills in collaborative learning environment. May be repeated four times, but only 1 unit may be applied toward graduation. P/NP grading.

Upper-Division Courses

C100. Genomics and Computational Biology. (5) Lecture, four hours; discussion, one hour. Introduction for biochemistry, students of technologies and mental data of genomics, as well as computational tools for analyzing them. Biochemistry and molecular biology dissected life into its component parts, one gene at a time. These mechanisms are putting this information back together to predict what happens in complete organism (e.g., over 80 percent of drug candidates fail in clinical trials). High-throughput technologies such as sequencing, microarrays, mass-spect, and robotics have given biologists incredible new capabilities to analyze complete genomes, expression patterns, functions, and interactions among organisms, populations, and species. Use and analysis of such datasets becomes essential daily activity for biomedical scientists. Core principles and methodologies for analyzing genomics data to analyze and design experiments, and methods for analyzing and design experiments, and methods for analyzing and design experiments.

C101. Introduction to Chemistry of Biology. (4) Lecture, three hours; discussion, one hour. Requisite: course 153A. Introductory lecture course in biology to be selected in consultation with instructor. P/NP or letter grading.


C105. Introduction to Chemistry of Biology. (4) Lecture, three hours; discussion, one hour. Requisite: course 153A. Introductory lecture course in chemistry to be selected in consultation with instructor. P/NP or letter grading.


C108. Mass Spectrometry for Chemists and Biochemists. (2) Lecture, one hour; laboratory, four hours. Requisite: course 153A. Introduction to principles and practice of organic and inorganic mass spectrometry. Topics include EI, CI, ICPMS, GC/MS, LC/MS, ESI, MALDI, MS/MS protein identification, and proteomics. Concurrently scheduled with course CM205A. P/NP or letter grading.

C110A. Physical Chemistry: Chemical Thermodynamics. (4) Lecture, three hours; discussion, one hour; tutorial, one hour. Requisite: courses 20B, Mathematics 32A, 32B, 33A, Physics 1A, 1B, and 1C, or 1AH, 1BH, and 1CH, or 6A, 6B, and 6C, or by petition. An introduction to chemical thermodynamics, with emphasis on applications of classical and statistical thermodynamics. Principles of statistical thermodynamics: probability, ensemble, partition functions, independent molecules, and perfect gas. Application of classical and statistical thermodynamics to molecules and solids. Application of classical and statistical thermodynamics to molecules and solids.

C110B. Physical Chemistry: Introduction to Statistical Mechanics and Kinetics. (4) Lecture, three hours; discussion, one hour; tutorial, one hour. Requisite: course 110A. Applications of classical and statistical thermodynamics to molecules and solids.

C110C. Physical Chemistry: Introduction to Molecular Spectroscopy. (4) Lecture, three hours; discussion, one hour; tutorial, one hour. Requisite: course 110B or 113B. Introduction to molecular spectroscopy, infrared and Raman spectroscopy, vibrations in polyatomic molecules, electronic spectroscopy, magnetic resonance spectroscopy. Concurrently scheduled with course C121B. P/NP or letter grading.

C114. Physical Chemistry Laboratory. (5) Lecture, two hours; laboratory, eight hours. Suggested for chemistry students with serious interest in life sciences, biochemistry, and molecular biology. Letter grading.

C115A-C115B. Quantum Chemistry. (4-4) Lecture, four hours; discussion, one hour; laboratory, eight hours. Suggested for chemistry students with serious interest in life sciences, biochemistry, and molecular biology. Letter grading.

C115B. Quantum Chemistry. (4-4) Lecture, four hours; discussion, one hour; laboratory, eight hours. Suggested for chemistry students with serious interest in life sciences, biochemistry, and molecular biology. Letter grading.


C116. Physical Chemistry Laboratory (Honors). (5) Lecture, two hours; laboratory, eight hours. Suggested for chemistry students with serious interest in life sciences, biochemistry, and molecular biology. Letter grading.

CM123A-C123B. Classical and Statistical Thermodynamics. (4-4) Lecture, four hours; discussion, one hour. Suggested for chemistry students with serious interest in life sciences, biochemistry, and molecular biology. Letter grading.

CM125A. Computational Methods for Chemists. (4) Lecture, four hours; laboratory, four hours. Preparation: programming experience in any BASIC, FORTRAN, C, C++, Java, or Pascal. Suggested: courses 113A, 153A. Mathematical and computer programming tools for constructing new chemical applications, including simple force fields and resulting statistical mechanics for simple molecules and macromolecules. Letter grading.

CM127. Synthetic Biology for Biologists. (4) Same as Chemical Engineering CM127. Lecture, four hours; discussion, one hour. Suggested: course 153A, Life Sciences 3, 23L. Engineering microorganisms for complex phenotype is common goal of metabolic engineering and synthetic biology. Production of advanced biofuels involves designing and constructing...
novel metabolic networks in cells. Such efforts require profound understanding of biochemistry, protein structure, and biological regulations and are aided by tools in bioinformatics, systems biology, and molecular biology. Fundamentals of metabolic biochemistry, protein structural design, and biotechnology. Use of systems modeling for metabolic networks to design microorganisms for energy applications. Concurrently scheduled with course CM227. Letter grading.

136. Organic Structural Methods. (5) Lecture, two hours; laboratory, eight hours. Requisites: courses 30C and 30CL, with grades of C– or better. Laboratory course in organic structure determination by chemical and spectroscopic methods; microtechniques. P/NP or letter grading.

C140. Bioinformatics. (4) Lecture, three hours. Requisites: courses 30C, 110A. Basic physical, chemical, and biological principles in bioinformatics; methodologies and strategies for top-down and bottom-up fabrication of ordered biologically derived molecules, characterization and detection techniques, and biogenic materials and applications at nanoscale. Concurrently scheduled with course C240. P/NP or letter grading.

C143A. Structure and Mechanism in Organic Chemistry. (4) Lecture, three hours; discussion, one hour. Enforced requisites: courses 30C and 30CL (may be taken concurrently), 110B, and 113A, with grades of C– or better. Mechanics of organic reactions. Acidic and basic catalysis; linear free energy relationships; isotopic effects; chemical orbital theory; stereochemistry; pericyclic reactions. May be concurrently scheduled with course C243A. P/NP or letter grading.

C143B. Mechanism and Structure in Organic Chemistry. (4) Lecture, three hours; discussion, one hour. Requisite: course C143A with grade of C– or better. Mechanisms of organic reactions; structure and detection of reactive intermediates. May be concurrently scheduled with course C243B. P/NP or letter grading.

144. Practical and Theoretical Introductory Organic Synthesis. (5) Lecture, two hours; laboratory, eight hours. Enforced requisites: courses 30C and 30CL, with grades of C– or better. Lectures on modern synthetic reactions and processes, with emphasis on stereospecific methods for carbon-carbon bond formation. Laboratory methods of synthetic organic chemistry, including techniques, synthesis of natural products, and molecules of theoretical interest. P/NP or letter grading.

C145. Theoretical and Computational Organic Chemistry. (4) Lecture, two hours; discussion, one hour, four hours. Requisite: courses 30C, 113A. Applications of quantum mechanical concepts and methods to understand and predict organic structures and reactivities. Computational modeling methods, including laboratory experience with force-field and quantum mechanical computer calculations. Concurrently scheduled with course C245. P/NP or letter grading.

147. Careers in Chemistry and Biochemistry. (2) Seminar, two hours. Limited to juniors/seniors. Exploration of employment and career opportunities available to students. Different speakers give short presentations on job opportunities in industries such as industry, government, research and development, education, law, and healthcare, explaining how their education in chemistry and biochemistry helped them become successful in their fields. Actual chemical concepts used in their particular professions. Students learn and understand real-life applications of chemical concepts found in their coursework. P/NP grading.

C150. Research Integrity in Cellular Biology, Molecular Biology, and Biochemistry Research. (2 or 4) Lecture, two hours; discussion, two hours. Data analysis and management, statistical methodologies, use of antibody and kit reagents, figure preparation, authorship, manuscript preparation, subjects protection, animal subject protection, and conflict of interest. May be repeated for credit. P/NP or letter grading.

153A. Biochemistry: Introduction to Structure, Enzymes, and Metabolism. (4) Lecture, four hours; discussion, one hour. Requisite: course 14D or 30B, with grade of C– or better. Recommended: Life Sciences 2, 3, 23L. Structure of proteins, carbohydrates, and lipids; enzymes, catalysis, and principles of metabolism; intracellular energetics, including glycolysis, citric acid cycle, and oxidative phosphorylation. P/NP or letter grading.

153AH. Biochemistry: Introduction to Structure, Enzymes, and Metabolism (Honors). (4) Lecture, three hours; discussion, one hour; tutorial, one hour. Enforced requisites: courses 153A or 153AH, Life Sciences 2, 3, 23L. Honors course parallel to course 153A. P/NP or letter grading.

155B. Biochemistry: DNA, RNA, and Protein Synthesis. (4) Lecture, three hours; discussion, one hour; tutorial, one hour. Enforced requisites: course 153A or 153AH, Life Sciences 2, 3, 23L. Honors course parallel to course 153B. P/NP or letter grading.

155BH. Biochemistry: DNA, RNA, and Protein Synthesis (Honors). (4) Lecture, three hours; discussion, one hour; tutorial, one hour. Enforced requisites: course 153A or 153AH, Life Sciences 2, 3, 23L. Honors course parallel to course 155B. P/NP or letter grading.

155C. Biochemistry: Biosynthetic and Energy Metabolism and Its Regulation. (4) Lecture, three hours; discussion, two hours. Enforced requisites: course 153A or 153AH, Life Sciences 2, 3, 23L. Honors course parallel to course 155C. P/NP or letter grading.

155D. Introduction to Protein Structural Biology. (4) Lecture, three hours; discussion, one hour. Enforced requisites: course 153A or 153AH. Life Sciences 3. Proteins are diverse set of macromolecules that perform critical functions within cells, ranging from enzymes that catalyze metabolic reactions to proteins that enable pathogens to cause disease. Introduction to field of protein structural biology that seeks to understand molecular basis of protein function through visualizing atomic structures and by investigating how alterations in protein structure affects function. Students gain fundamental understanding of protein structure and its relationship to function and learn how experimental and computational methods are used to determine three-dimensional structures of proteins. Hands-on training in computer graphics programs and online tools used to visualize and analyze protein structures. Letter grading.

155L. Biochemical Methods I. (4) Lecture, two hours; laboratory, four hours. Enforced requisites: courses 14B and Life Sciences 23L or 20L and 30AL, and 153A or 153AH (may be taken concurrently), with grades of C– or better. Integrated term-long project involving purification of key enzyme for alcohol production from bacteria via affinity chromatography. Assessment of protein amount, purity, and activity of enzyme. Techniques include protein determination by Bradford assay, polyacrylamide gel electrophoresis, immunoblotting, and enzyme activity assays to determine enzyme activity (Km, Vmax, inhibitor studies). P/NP or letter grading.

154. Biochemical Methods II. (5) Lecture, two hours; laboratory, three hours. Enforced requisites: courses 153A or 153AH, 153B or 153BH, and 153L, with grades of C– or better. Recommended: course 156. Two to three major laboratory projects using biochemical techniques to investigate contemporary problems in biochemistry. Topics include transcription activation, molecular basis of DNA-protein interactions, biochemical basis of platelet activation, and initiation of blood clotting cascade. Experiments entail characterization of function of proteins, nucleic acids, and lipids involved in these processes. P/NP or letter grading.

C155. Mitochondria in Medicine, Biology, and Chemistry. (1) Seminar, two hours every other week. Open to undergraduate and graduate science majors considering or currently in areas related to mitochondria. Large number of physiological and pathophysiological processes involve mitochondrial function and dysfunction. Focus on understanding of how mitochondrial form and function impact health and disease. Physiology and cell biology of healthy and dysfunctional mitochondria; mitochondrial function in assessed at subcellular, cellular, tissue, and organismal levels. Topics include in-depth analyses of literature and critical evaluation of experimental design and methods of current research. Concurrently scheduled with course CM255. P/NP grading.

156. Physical Biochemistry. (4) Lecture, four hours; discussion, one hour. Enforced requisites: courses 110A, 153A. Biochemical kinetics; solution thermodynamics of biochemical systems; multiple equilibria; hydrodynamics and energetics; introduction to bioinformatics and methodologies, with emphasis on concepts and inventing new computational and statistical techniques to analyze biological data. Focus on bioinformatics and alignment algorithms. Concurrently scheduled with course CM259. P/NP or letter grading.

CM160A. Introduction to Bioinformatics. (4) Same as Computer Science CM121L. Lecture, four hours; discussion, two hours. Introduction to data structures and algorithms. Enforced requisites: Computer Science 32 or Program in Computing 10C with grade of C– or better, and one course from Biostatistics 100A, 110A, Civil Engineering 110, Electrical Engineering 131A, Mathematics 170A, or Statistics 100A. Prior knowledge of biology not required. Designed for engineering students as well as students from biological sciences and computer science. Introduction to bioinformatics and methodologies, with emphasis on concepts and inventing new computational and statistical techniques to analyze biological data. Focus on bioinformatics and alignment algorithms. Concurrently scheduled with course CM260A. P/NP or letter grading.

CM160B. Algorithms in Bioinformatics and Systems Biology. (4) Same as Computer Science CM122L. Lecture, four hours; discussion, two hours. Enforced requisites: Computer Science 32 or Program in Computing 10C with grade of C– or better, and one course from Biostatistics 100A, 110A, Civil Engineering 110, Electrical Engineering 131A, Mathematics 170A, or Statistics 100A. Course CM160A is not requisite to CM160B. Designed for engineering students as well as students from biological sciences and computer science. Development and application of computational approaches to biological questions, with focus on formulating interdisciplinary problems as computational problems and then solving these problems using algorithmic techniques. Computational techniques include those from statistics and computer science. Concurrently scheduled with course CM260B. Letter grading.


C163. Membrane Protein Structure and Function. (4) Lecture, four hours. Enforced requisites: course 156. Detailed examination of membrane protein works. Topics include lipid bilayer properties and how they affect membrane protein function and
biological membranes, structure-function relationships, and the role of free radicals in diseases such as neurodegenerative diseases (e.g., Huntington’s, Parkinson’s, and Alzheimer’s diseases). Concurrently scheduled with course C264. P/NP or letter grading.

C165. Metabolic Control by Protein Modification. (4) Lecture, two to three hours; discussion, one to two hours. Enforced requisites: courses 153A, 153B, or Life Sciences 3 or 23L. Requisite: understanding of biophysical characterization of diverse structures and functions of RNA molecules in metabolism of living systems. RNA has shown to act both as catalyst in living systems and as potent modulator of gene expression control at every level of gene expression pathways (transcription, RNA processing, translation, and degradation). RNAs are now being used as therapeutic agents in gene therapy approaches. Examination of these various aspects and in-depth analysis of RNA structure and function, using primary research literature and research-grade software, will be integrated. Letter grading.

C170. Biochemistry and Molecular Biology of Photosynthetic Apparatus. (2 to 4) (Same as Molecular, Cell, and Developmental Biology M170.) Lecture, two to three hours; discussion, two to three hours. Enforced requisites: courses 153A and 153B, or Life Sciences 3 or 23L and course 153L. Recommended: courses 153C, 154, Life Sciences 4. Light harvesting, photosystems, electron flow, carbon fixation, photosynthetic oxygen evolution, and oxidative phosphorylation. Letter grading.

C180. Solid-State Chemistry. (4) Lecture, three hours. Enforced requisites: course 172 with grade of C– or better. Study of new materials and methods for their preparation and characterization, with emphasis on those that could lead to applications in transport, and magnetic properties, leading to deeper understanding of these materials. Concurrently scheduled with course C280. P/NP or letter grading.

C184. Chemical Instrumentation. (5) Lecture, five hours; laboratory, eight hours. Enforced requisites: courses 30CL and 110A. Comprehensive understanding of instrumentation, including atomic absorption spectroscopy, gas chromatography, mass spectrometry, nuclear magnetic resonance, polarography, x-ray fluorescence, and other modern methods. Letter grading.


C192A-192B. Undergraduate Practicum in Chemistry and Biochemistry. (4-4) Lecture, one hour; laboratory, four hours; tutorial, three hours per week per unit. Limited to juniors/seniors. Designed for undergraduate students who are part of research group. Advanced study and analysis of current topics in physical, organic, or inorganic chemistry or biochemistry. Discussion of current research and literature in research specialty of faculty member teaching course. May be repeated for credit. P/NP grading.

C196A. Research Apprenticeship in Chemistry and Biochemistry. (2 to 4) Tutorial, three hours per week per unit. Limited to juniors/seniors. Entry-level research apprenticeship for upper-division students under guidance of faculty mentor. Consult department for additional information regarding requirements, enrollment petitions, and written proposal deadlines. May be taken for maximum of 4 units. Individual contract required. P/NP or letter grading.

C196B. Research Apprenticeship in Chemistry and Biochemistry. (2 to 4) Tutorial, three hours per week per unit. Limited to juniors/seniors. Designed for graduate biochemistry and molecular biology disinterested life into its component parts, one gene at a time, but lacked integrative mechanisms for putting this information back together to predict what happens in a complex organism (e.g., over 80 percent of drug candidates fail in clinical trials). High-throughput technologies such as sequencing, microarrays, mass-spectrometry, and robotics have given biologists incredible new capabilities to analyze complete genomes, expression patterns, functions, and interactions across whole organisms, populations, and species. Use and analysis of such datasets becomes an essential daily activity for biomedical scientists. Core principles and methodologies for analyzing genomics data to answer biological and medical questions, with focus on concepts that guide data analysis rather than algorithm details. Concurrently scheduled with course C100. S/U or letter grading.

201. Scientific Proposal Writing. (2) Lecture, three hours. Designed for graduate biochemistry and molecular biology students. How to write scientific proposals to be submitted to funding agencies. How to develop curricular vitae, put together grant proposals, and critique proposals. Letter grading.
203B. Ethics in Chemical Research. (2) Seminar, one hour. Discussion of ethics in graduate education, teaching, and chemical research. Includes issues such as conflicts of interest, plagiarism, intellectual property, sexual harassment, and other topics related to ethical conduct of research. S/U grading.

203C. Responsible Conduct and Ethics in Genetics Research. (2) Lecture, 90 minutes. Data analysis and management, statistical methods, use of commercial reagents, microscopy data analysis, figure preparation, authorship, mentoring, human subjects protection, animal subject protection, and conflict of interest. May be repeated for credit. S/U or letter grading.

203D. Advanced Topics in Responsible Conduct in Cellular and Molecular Biology Research. (2) Seminar, two hours. An introduction to responsible conduct of research, methodologies for research projects. Critical thinking and problem-solving skills. Concurrently scheduled with course C113B. Independent study project required of graduate students. S/U or letter grading.


256A. Computational Methods for Chemical Systems. (Same as Computer Science C205A.) Lecture, six hours. Requisites: courses C206 and CS170. Introduction to computer-based techniques in solution of problems in chemical systems. S/U or letter grading.


257E. Computational Methods for Chemical Systems. (Same as Computer Science C205A.) Lecture, six hours. Requisites: courses C206 and CS170. Introduction to computer-based techniques in solution of problems in chemical systems. S/U or letter grading.


M230B. Structural Molecular Biology. (4) Same as Molecular, Cell, and Developmental Biology M230B.) Lecture, three hours; discussion, one hour. Requisites: Mathematics 3C, Physics 6C. Selected topics from principles of biological structure; structures of globular protein, and RNAs; structures of fibrous proteins, nucleic acids, and polysaccharides; harmonic analysis and Fourier transforms; principles of electron, neutron, and X-ray diffraction; optical and computer filtering; three-dimensional reconstruction. S/U or letter grading.

M230D. Structural Molecular Biology Laboratory. (2) (Same as Molecular, Cell, and Developmental Biology M230D.) Laboratory, two hours; discussion, one hour. Requisites: M230B. Methods in structural molecular biology, including experiments utilizing single crystal X-ray diffraction, low angle X-ray diffraction, electron spectroscopy, and mass spectrometry; thin-film, three-dimensional reconstruction from electron micrographs, and model building. S/U or letter grading.


247. Organic Colloquium. (2) Seminar, two hours. Designed for organic chemistry and related areas presented by staff, outside speakers, postdoctoral fel- lows, and graduate students. May be repeated for credit. S/U or letter grading.

248. Organic Chemistry Student Seminar. (2) Seminar, two hours. Designed to present, by outside speakers, and graduate students. No credit granted to students who have received credit for course C243A. S/U or letter grading.

249A. Methods of Materials Chemistry: Synthesis, Characterization, Physical Properties, Applications, and Devices. Two hours. Designed for first-year graduate students to teach advanced problem-solving skills and critical thinking, with focus on problems and recent literature per- taining to materials chemistry. How materials are syn- thesized and characterized. Discussion of important physical properties, as well as broad range of applica- tions and behavior in devices. S/U grading.

249B. Methods of Chemical Synthesis: Organic/In- organic/Organometallic. Two hours. Designed for first-year graduate students to teach advanced problem-solving skills and critical thinking, with focus on problems and recent literature per- taining to materials chemistry. How materials are syn- thesized and characterized. Discussion of important physical properties, as well as broad range of applica- tions and behavior in devices. S/U grading.

250. Research Integrity in Cellular Biology, Mo- lecular Biology, and Biochemistry Research. (2 or 4) Formerly numbered 203A.) Lecture, two hours; discussion, two hours. Data analysis and manage- ment, statistical methods, use of antibody and kit re- agents, figure preparation, authorship, mentoring, human subjects protection, animal subject protection, and conflict of interest. May be repeated for credit. S/U or letter grading.

M252. Seminar: Advanced Methods in Compu- tational Biology. (2) (Same as Bioinformatics M252 and Human Genetics M252.) Seminar, one hour; discus- sion, one hour. Designed for advanced graduate stu- dents. Enrollment by invitation. Methodology in bioinformatics and computational biology through presentation of current research literature. How to se- lect and apply methods from computational and mathematical disciplines to problems in bioinfor- matics and computational biology; development of novel methodologies. S/U or letter grading.

CM255. Mitochondria in Medicine, Biology, and Chemistry. (1) Same as Biological Chemistry M255.) Seminar, two hours. Examination of the role of mitochondria in health and disease. S/U or letter grading.

CM256. Chemical Biology of Chlamydomonas. (2) Same as Molecular, Cell, and Developmental Biology M256. Lecture, two hours; discussion, one hour. Requisite: course C243A. Chemical biology and organometallic compounds. S/U grading.

CM260A. Introduction to Bioinformatics. (4) (Same as Bioinformatics M260A, Computer Science CM261, and Human Genetics M262A.) Lecture, four hours; discussion, two hours. Enforced requisites: Computer Science 32 or Program in Computing 10C with grade of C– or better, and one course from Biostatistics 10A, 110A, Civil Engineering 110A, or Electrical Engi- neering 131A, Mathematics 170A, or Statistics 10A. Prior knowledge of biology not required. Designed for engineering students as well as students from biological sciences and medical school. Introduction to bio- informatics and methodologies, with emphasis on concepts and inventing new computational and sta- tistical techniques to analyze biological data. Focus on course analysis and analysis of proteins. Con- currently scheduled with course CM160A. S/U or letter grading.

CM260B. Algorithms in Bioinformatics and System- atics. (4) Same as Molecular, Cell, and Developmental Biology M260B, Computer Science CM262B, and Computer Science CM262C.) Lecture, four hours; discussion, two hours. Enforced requisites: Computer Science 32 or Program in Computing 10C with grade of C– or better, and one course from Biostatistics 10A, 110A, Civil Engineering 110A, Electrical Engi- neering 131A, Mathematics 170A, or Statistics 10A. Course CM260A is not required to CM260B. De-
Chemistry and physics of a variety of synthetic inorganic nanostructures, including metallic nanostructures (nanocrystals, nanorods, nanowires), semiconductor nanostructures (quantum dots/rods, nanowires, plates), and carbon nanostructures (fullerene, nanotubes), Electron tomography and other techniques. Introduction to applied chemistry: catalysis, physical chemistry, and materials. S/U or letter grading.


273. Advanced Topics in Inorganic Chemistry. (2 to 4) Lecture, two to four hours. Each offering encompassed one recognized specialty in inorganic chemistry, generally taught by faculty members whose research interests embrace that specialty. S/U or letter grading.

272A-272Z. Seminars: Research in Inorganic Chemistry. (2 each) Seminar, three hours. Advanced study and analysis of current topics in inorganic chemistry. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

272A. Seminar in Inorganic Chemistry. S/U or letter grading.

272B. Seminar in Inorganic Chemistry. S/U or letter grading.


272D. Seminar in Inorganic Chemistry. S/U or letter grading.

272E. Seminar in Inorganic Chemistry. S/U or letter grading.


272N. Seminar in Inorganic Chemistry. S/U or letter grading.

272O. Seminar in Inorganic Chemistry. S/U or letter grading.

272P. Seminar in Inorganic Chemistry. S/U or letter grading.


272S. Seminar in Inorganic Chemistry. S/U or letter grading.


272V. Seminar in Inorganic Chemistry. S/U or letter grading.


272X. Seminar in Inorganic Chemistry. S/U or letter grading.


trical, photonic, and microelectromechanical devices. Discussion of intellectual property issues and development of business plan. May be repeated for credit. S/U or letter grading.


M370A. Integrated Science Instruction Methods. (4) Same as Earth, Planetary, and Space Sciences M370A and Physics M370A. Lecture, two hours; discussion, one hour; laboratory, one hour. Preparation: one introductory lower-division year (including laboratory) each of chemistry, life sciences, and physics and at least two Earth science courses, preferably one with field experience. Classroom management, lesson design, assessment, history of science education, S/U or letter grading.

M370B. Integrated Science Instruction Methods. (4) Same as Earth, Planetary, and Space Sciences M370B and Physics M370B. Lecture, two hours; discussion, one hour; laboratory, one hour. Requisite: course M370A or Earth, Planetary, and Space Sciences M370A or Physics M370A. Application of learning theory to science instruction and classroom management, including use of technology, collaborative learning, laboratory safety, ethical issues, field experiences, and professional development. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

400. Safety in Chemical and Biochemical Research. (2) Lecture, two hours. Survey of safe laboratory practice for experimental research in organic, inorganic, and physical chemistry and biochemistry. Topics include laser safety, cryogenic hazards, high- and low-pressure experimentation, gas and carcinogen hazards, chemical spills, fire extinguishing, and chemical disposal. S/U grading.

495. Teaching College Chemistry. (2) Seminar, two hours; discussion, two hours; 20 hours training during week prior to Fall Quarter. Course for teaching assistants designed to deal with problems and techniques of teaching college chemistry. S/U grading.

596. Directed Individual Study or Research. (2 to 16) Tutorial, to be arranged with faculty member who directs study or research. May be repeated for credit. S/U or letter grading.

597. Preparation for MS Comprehensive Examination or PhD Qualifying Examinations. (2 to 4) Tutorial, to be arranged. May be taken for maximum of 8 units. S/U grading.

598. Research for and Preparation of MS Thesis. (2 to 16) Tutorial, to be arranged. Each faculty member supervises research of MS students and holds research group meetings, seminars, and discussions with students. May be repeated for credit. S/U or letter grading.

599. Research for and Preparation of PhD Dissertation. (2 to 16) Tutorial, to be arranged. Each faculty member supervises research of PhD students and holds research group meetings, seminars, and discussions with students. May be repeated for credit. S/U or letter grading.

CÉSAR E. CHÁVEZ DEPARTMENT OF CHICANA AND CHICANO STUDIES

College of Letters and Science
7349 Bunche Hall
Box 951559
Los Angeles, CA 90095-1559
310-206-7695
studentadvisor@chavez.ucla.edu
http://www.chavez.ucla.edu

Eric R. Avila, PhD, Chair

Professors
Eric R. Avila, PhD
Judith F. Baca, MA
Matthew A. Barreto, PhD
Charlene Villaseñor-Black, PhD
Alicia Gaspar de Alba, PhD
Laura E. Gómez, PhD
Reynaldo F. Macias, PhD
Pedro A. Noguera, PhD
Susan J. Plain, PhD
Otto Santa Ana, PhD
Daniel G. Solórzano, Jr., PhD
Abel Valenzuela, Jr., PhD
José Luis Valenzuela, BA

Associate Professors
Leisy J. Abrego, PhD
Mayle S. Blackwell, PhD
Leobardo F. Estrada, PhD
Raúl A. Hinojosa-Quiroz, PhD
Gaye T. Johnson, PhD
María Cristina Pons, PhD
Robert Chaio Romero, JD, PhD

Assistant Professor
Genevieve G. Carpio, PhD

Scope and Objectives
The mission of the UCLA César E. Chávez Department of Chicana and Chicano Studies is to train a new generation of scholars to research and analyze the life, history, and culture of Mexican-origin people within the U.S., as well as of other Latina/Latino and indigenous populations in the Americas.

Addressing local, national, and transnational contexts, the Chicana/Chicano studies curriculum at UCLA explores race, class, gender, and sexuality paradigms as they have shaped the history of the field; as well as new directions in the study of Chicana/Chicanos and Latinas/Latinos, including (1) border and transnational studies; (2) expressive arts; (3) history, literature, and language of Americas; and (4) labor, law, and policy studies.

Departmental faculty members, situated in one of the most diverse cities in the world, utilize Los Angeles as a laboratory for studying the social transformations taking place in California, the Southwest, and the U.S. The department provides students with the interdisciplinary research tools necessary to advance knowledge in the field, provide academic leadership, and serve community needs with academic resources.

Undergraduate Study
The Chicana and Chicano Studies Department offers a designated capstone program for undergraduate majors. Students have options for completing a senior honors thesis, individual research, or senior project under the direction of a faculty member. Alternatively, students may elect to complete an upper-division course that includes additional coursework culminating in completion of a capstone paper or creative project. Through their capstone work, students are expected to demonstrate working knowledge of the major findings and methods of the disciplines from which they have drawn their Chicana and Chicano studies coursework, show their capacities for conceiving and executing a research or creative project on a self-selected topic as well as identifying and evaluating relevant documentation pertaining to that project, demonstrate appropriate levels of scholarly discourse on their selected topic, and develop greater capacity to be of lifelong service to the Chicana/Chicano and Latina/Latina community and to global society in the tradition of César Chávez and social activist exemplars.

Chicana and Chicano Studies BA

Capstone Program
The BA program in Chicana and Chicano Studies is committed to the practice of different forms of scholarship and pedagogy and to the promotion of critical thinking about such issues as gender, sexuality, social action, language, race, ethnicity, class, assimilation/acclimation paradigms, and indigenous traditions. The literary and visual arts often function as vehicles for social change and creative empowerment, and so they constitute one focus of the curriculum, that aims to strike a balance among the social sciences, humanities, arts, and the professions. The major prepares students for graduate education in academic and professional fields and for a variety of positions that involve community and social service in the U.S. and abroad.

Preparation for the Major
Required: Chicana and Chicano Studies 10A, 10B, Spanish 5 or equivalent.

Transfer Students
Transfer applicants to the Chicana and Chicano Studies major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one interdisciplinary Chicana/Chicano history and culture course, one interdisciplinary Chicana/Chicano social structure and contemporary conditions course, and five quarter terms of Spanish.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major
Required: A total of 11 upper-division courses, including Chicana and Chicano Studies 101; one service learning course from 100SL or
M170SL or from the approved list available in the department office each term; two related study courses from the approved list of courses outside the department (related study includes courses that provide a comparative perspective to Chicanas and Chicano studies and/or a contextualization of Chicanas and Chicanos in the world); one advanced seminar course from 191 or another course by petition to the department chair; and a concentration of four courses in one area listed below and two courses in a second area.

Border and Transnational Studies: Chicanas and Chicano Studies CM110, 120, M124, M125, M126, M132, 143, M144, CM147, 151, 152, 153, M154, M155A, M156A, 163, 176, 184, 191


No more than 8 units of 188, 191, and 199 courses may be applied toward the major; enrollment in the courses must be approved in writing by the department chair.

Each major course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better.

Honors Program

The Chicanas and Chicano Studies honors program provides the opportunity for motivated and dedicated students to undertake a year-long research or creative project with the guidance and supervision of a faculty member. The program is open to all juniors and seniors who have (1) a 3.5 grade-point average in the major, (2) a cumulative GPA of 3.0 or better, and (3) completed 90 or more total units, including Chicanas and Chicano Studies 10A, 10B, 101, and one course from 89, 89HC, 189, or 189HC.

The application for admission must be submitted in spring quarter of the year prior to admission to the program, with the advice and consent of a faculty sponsor. The proposal, research, data collection, analysis, and writing of the thesis (or the creative equivalent to this process) take place in Chicanas and Chicano Studies 198A, 198B, and 198C, which may not be applied toward the major requirements. An honors thesis of at least 30 pages or a significant creative project is required.

Students who are currently undertaking the optional multidisciplinary senior thesis and who are interested in pursuing the honors program may opt to switch to the honors program (provided it does not delay their progress toward the degree) with the approval of the department.

Optional Multidisciplinary Senior Thesis

Chicanas and Chicano Studies majors have the option during their senior year to enroll in two 199 courses with the intention of producing an undergraduate thesis. The first term includes thesis conceptualization and formulation, along with preliminary data collection for the thesis. The second term entails completion of the data collection, analysis of the data, and writing of the thesis. Enrollment in the two 199 courses is with the advice and consent of a faculty member.

Chicanas and Chicano Studies Minor

The Chicanas and Chicano Studies minor complements study in another traditional field. Students participating in the minor are required to complete both a departmental major in another discipline and the Chicanas and Chicano Studies minor.

To enter the minor, students must have an overall grade-point average of 2.0 or better, have completed 45 units, and file a petition with the student adviser in 7351 Bunche Hall.

Required Lower-Division Courses (10 units):
- Chicanas and Chicano Studies 10A, 10B.

Required Upper-Division Courses (20 units minimum): Chicanas and Chicano Studies 101 and four elective courses (20 units minimum) selected from the approved list (available in the department office each term).

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The César E. Chávez Department of Chicanas and Chicano Studies offers Master of Arts (MA) and Doctor of Philosophy (PhD) degrees in Chicanas and Chicano Studies.

Chicanas and Chicano Studies

Lower-Division Courses

M5A-M5B-M5C, Elementary Nahuatl. (4-4-4) (Same as Indigenous Languages of the Americas M5A-M5B-M5C and International and Area Studies M5A-M5B-M5C.) Lecture, five hours. Course M5A is enforced requisite to M5B, which is enforced requisite to M5C. Introduction to Aztec language of central Mexico. Coverage of basic Nahualt grammar, with equal emphasis on reading, writing, and comprehension. P/NP or letter grading.

10A. Introduction to Chicanas and Chicano Studies: History and Culture. (6) Lecture, three hours; discussion, one hour. Interdisciplinary survey of diverse historical experiences, cultural factors, and ethnic/racial paradigms, including social structure, gender, sexuality, language, and borders, that shape Chicanas and Chicano identities. Emphasis on critical reading and writing skills. Letter grading.

10B. Introduction to Chicanas and Chicano Studies: Social Structure and Contemporary Conditions. (5) Lecture, three hours; discussion, one hour. Multidisciplinary examination of representation, ideologies, and material conditions of Chicanas/Chicanos, including colonialism, race, labor, immigration, poverty, assimilation, and patriarchy. Emphasis on critical reading and writing skills. Letter grading.

M15A-M15B-M15C. Intermediate Nahuatl. (4-4-4) (Same as Indigenous Languages of the Americas M15A-M15B-M15C and International and Area Studies M15A-M15B-M15C.) Lecture, four hours. Enforced requisites: courses M5A, M5B, M5C. Course M15A is enforced requisite to M15B, which is an enforced requisite to M15C. Taught primarily in Nahuatl. Examination of Nahualt (Aztec) language of central Mexico at intermediate level. Coverage of Nahualt grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

M15B. Leadership and Student-Initiated Retention. (2) Same as American Indian Studies M15B, American Indian Studies M15B, and American Indian Studies M15B.) Seminar, two hours. Limited to freshmen/sophomores/first-year transfer students. Not open for credit to students with credit for course M118. Exploration of issues in retention at UCLA through lens of student-initiated and student-run programs, efforts, activities, and services. Focus on populations with historically low graduation rates targeted by Campus Retention Committee. May not be applied toward departmental major or minor elective requirements. May be repeated once for credit. Letter grading.

88. Sophomore Seminars: Chicanas and Chicano Studies. (2) Seminar, two hours. Limited to lower-division students. Readings and discussions designed to introduce students to current research in Chicanas and Chicano Studies. Culminating project may be required. May not be applied toward departmental major or minor requirements. May be repeated for credit with topic change. P/NP or letter grading.

97. Variable Topics in Chicanas and Chicano Studies. (2) Seminar, two hours. Requisite: course 10A or 10B. Current topics and particular research methods in Chicanas and Chicano Studies through readings and other assignments. May be repeated for credit. P/NP or letter grading.

98. Professional Schools Seminars. (2) Seminar, two hours. Limited to 10 students. Introduction to issues of professional (nonacademic) settings and careers through readings and other assignments. P/NP or letter grading.

Upper-Division Courses

100SL. Barrio Organization and Service Learning. (5) Seminar, two hours; discussion, two hours; field placement, six hours. Limited to juniors/seniors. Service learning placement in community-based organizations, labor union, or service-oriented nonprofit organizations. Study of role that these organizations play in improvement and change of Chicanas/Chicano communities. Students meet on regular basis with instructors and provide periodic reports of their experience. Letter grading.

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M102. Mexican Americans and Schools. (4) Same as Education M102.) Seminar, four hours. Theoretical and empirical overview of Chicana/Chicano educational issues in U.S., with special emphasis on disenfranchising effects of race, gender, class, and immigrant status on Chicano/a educational aspirations and achievement. Examination of how historical, social, political, and economic forces impact Chicana/Chicano educational experience. P/NP or letter grading.

M103C. Origins and Evolution of Chicano Theater. (5) Same as Theater M103C.) Lecture, three hours. Designed for juniors/seniors, Exploration of development of Chicano/Achter theater since 1980, including discussion of Chicano and Chicana playwrights and drama, such as plays written by Chicanas/Latinas. Required readings represent works written with focus on themes of identity, ethnicity, gender, and cross-border experiences leading to social change. Critical reading and analysis of works, searching for strengths and flaws, point to unique contributions of each work to greater body of U.S. literature. P/NP or letter grading. 


104. Comedy and Culture: Your Humorous Life. (4) Lecture, four hours. How to mine unique humorous life adventures from others’ cultural identities and turn those into humor into human literature. Students acquire skills to read their stories out loud, with emphasis on comedy in their pieces through art of storytelling and performance. P/NP or letter grading.

M105A. Early Chicana/Chicano Literature, 1400 to 1920. (5) Same as English M105A.) Lecture, four hours; discussion, one hour (when scheduled). Required for majors. Enforced requisites: English Composition 3 or 3H, Survey of Chicana/Chicano literature from poetry of Tripe and Aztec Empire through end of Mexican Revolution (1920), including oral and written forms (poetry, corridos, testimonios, folklore, novels, short stories, and drama) by writers such as Nezahualcóyotl (Hungry Coyote), Cabaza de Vaca, Lorenzo de Zavala, Maria Amparo Ruiz de Burton, Eusebio Chacón, Daniel Venegas, and Lorena Villagés de Magón. P/NP or letter grading.

M105B. Chicana/Chicano Literature from Mexican Revolution to the Movimiento, 1920 to 1970s. (5) Same as English M105B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: English Composition 3 or 3H, Survey of Chicana/Chicano literature from 1920s through Great Depression and World War II, ending with Chicana/Chicano civil rights movement. Oral and written narratives by writers such as Consuelo Kanaga, Conrado Esquilin, and Carmen Pappademos.

M105C. Chicana/Chicano Literature since the Movimiento, 1970s to Present. (5) Same as English M105C.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: English Composition 3 or 3H, Survey of Chicana/Chicano literature since 1970s, focusing on Chicana and Chicano feminist activism as well as Central and South American migrant community and the shape of 21st-century chicada. Oral, written, and graphic fiction, poetry, and drama by Chicana/Chicanos, such as Nellie Yolanda, Los Bros Hernández, Ana Castillo, and Dago-berto Gilb guide exploration of queer and feminist issues, Chicano/a studies, Reagan generation, immigration debates, and emerging Latina/Latino masculinity. P/NP or letter grading.

M105D. Introduction to Latino/Latina Literature. (5) Same as English M105D.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: English Composition 3 or 3H. Survey of U.S. Latino/Latina literature and introduction to its major critical trends, with emphasis on groups of Caribbean, Mexican, South American, and Central American origin. Representative works read in relation to such topics as relationship between Latino/Latina populatio


CM110. Chicana Feminism. (4) Same as Gender Studies CM132A.) Lecture, four hours. Enforced requisites: course 10A or Gender Studies 10. Examination of theories and practices of women who identify as Chicana or Chicano feminist. Analysis of Chicanas who do not identify as feminist but whose practices attend to gender inequities faced by Chicanas both within Chicana/Chicano community and dominant society. Comparison to Anglo and other Third World women. Concurrently scheduled with course CM214. P/NP or letter grading.

111. Chicana/Chicano and Latina/Latino Intellectual Traditions. (5) Lecture, five hours. General view of philosophical, cultural, and social thought as well as intellectual traditions in Americas. Roles of writers as intellectuals and cultural/political/socialists, and as definers of national identity, social reality, and struggles of liberation. Letter grading.

113. Day of Dead Ritual. (4) Lecture, four hours; discussion, one hour (when scheduled). Introduction to philosophical roots and evolution of traditional celebration of Day of Dead ritual. Contemplation of indigenous Mexican, Mexican, and Native American influences and manifestations of this ritual. Special attention to Nahua ritual language and worldview related to this ancient ritual, such as ancient calendar systems. Discussion of role critical thinking about what is observed in altars today and impact globalization has on tradition. P/NP or letter grading.

M114. Chicanos in Film/V. (5) Same as Film and Television M1113.) Lecture, five hours; seminar, five hours; discussion, one hour. Goal is to gain nuanced understanding of Chicano cinema as political, socioeconomic, cultural, and aesthetic practice. Examination of representation of Mexican Americans and Chicanos in four Hollywood genres—silent greaser films, social problem films, Westerns, and gang films—that are major genres that account for films about or with Mexican Americans produced between 1908 and 1980. Examination of recent Chicano-produced films that subvert or signify on these Hollywood genres, including Zoot Suit, Ballad of Gregorio Cortez, and Born in East L.A. Consideration of shorter, more experimental work that critiques Hollywood image of Chicanos. Guest speakers include both pioneer and up-and-coming filmmakers. P/NP or letter grading.

M115. Musical Aesthetics in Los Angeles. (4) Same as Ethnomusicology M115.) Lecture, four hours; seminar, three hours. Confronting aesthetics from classical perspective of art as intuition, examination on cross-cultural basis of diverse musical contexts within vast multiculturality of Los Angeles urban landscape. Focus on various musical networks and specific experiences of Chicanos/Latinos. American, African-American, Asian, rock culture, Western art music tradition, and commercial music industry. P/NP or letter grading.

M116. Chicanos/Latinos in Music in U.S. (5) Same as Ethnomusicology M116.) Lecture, four hours; discussion, one hour. Historical and analytical examination of musical expression of Latino peoples who have inhabited present geographical boundaries of U.S. with emphasis on present geographical boundaries of U.S. P/NP or letter grading.

117. Chicana/Chicana Images in Mexican Film and Literature. (4) Lecture, four hours. Preparation: adequate understanding of Spanish-language films without English subtitles. Throughout its rich history, spanning more than 100 years, Mexican cinema has produced great variety of films that deal with Chicana/Chicana experience. Analysis of Mexican cinematic discourse portrayal of Chicanas/Chicanos has been plagued by use of stereotypes that limit visual representation of Chicanas/Chicanos. Exploration of causes and effects for such obsolete cinematic representation. P/NP or letter grading.

M118. Student-Initiated Retreat and Outreach Issues in Higher Education. (4) Same as African American Studies M118, American Indian Studies M118, and Asian American Studies M118.) Lecture, four hours. Exploration of issues in outreach and re-
tention of students in higher education, especially through student-initiated programs, efforts, activities, and services, with focus on UCLA as case. May be repeated twice for credit. Letter grading.


M121. Issues in Latina/Latino Poverty. (4) Same as Labor and Workplace Studies M121 and Urban Planning M140L. Lecture, four hours. Examination of nature and extent of urban and rural poverty confronting Latina/Latinos. Special emphasis on anti-poverty policies of government and nonprofit organizations and social planning and economic development strategies. Attention also to literature on underdevelopmental racial formation in Chicana/Chicano community. Letter grading.


123. Applied Research Methods in Latina Communities. (4) Lecture, three hours. Through combination of lectures, key readings, and several experiments, introduction to several applied research methods that are helpful in producing sound and methodologically rigorous studies on poor and/or Latino communities, including important data that can be used for critical analysis and policy recommendations. Letter grading.

M124. Latino Immigration History and Politics. (4) Same as Honors Collegium M141L. Lecture, four hours. Overview of immigration in 20th century, examining social, political, and economic contexts out of which the development of Latin American immigration to U.S. has occurred. Letter grading.

M125. U.S./Mexico Relations. (4) Same as Labor and Workplace Studies M125L. Lecture, four hours. Examination of complex dynamics in relationship between U.S. and Mexico, also using political approach to study of asymmetrical integration between advanced industrial economies and developing countries. P/NP or letter grading.


M128. Race, Gender, and U.S. Labor. (4) Same as Labor and Workplace Studies M128L. Lecture, four hours. Designed for juniors/seniors. Introduction to history of labor, organized labor movement in North America. Discussion of race, class, and gender issues raised within movement, and various strategies for social change and economic equity pursued through organized labor and other means. Letter grading.

129. Field Research Methods in Labor and Workplace Studies. (5) Lecture, four hours; field studies, two hours. Designed for juniors/seniors. Discussion of role of research and evaluation in society and in improvement of quality of life for Latina/Latino communities. Review and application of field research methods to labor organizations and workplace sites, especially participant observation, interview techniques, and grounded theory and other methods of data analysis. Letter grading.

M130. Worker Center Movement: Next Wave Organizations. (4) (Same as African American Studies M167, Asian American Studies M166C, and Labor and Workplace Studies M167.) Seminar, three hours. Development of theoretical and practical understanding of worker center movement, with focus on historical factors that have led to emergence and growth of worker centers. Role of worker centers in promoting multiracial and multicultural campaigns for workplace and economic justice. Transnational cross-border solidarity issues and rights of undocumented workers. P/NP or letter grading.

131. Barrio Popular Culture. (4) Lecture, three hours. Course will focus on organizing study of Chicana/Chicano popular culture by focusing on barrio as metaphor for community. Examination of beliefs, myths, and values of Chicana/Chicano culture and how they influence community, legends, stereotypes, and popular art forms through literature, film, video, music, mass media, and oral history. Letter grading.


M135. Bilingual Writing Workshop. (4) (Formerly numbered CM135S.) Same as Gender Studies M135SC.) Seminar, four hours. Limited to juniors/seniors. Writing sample required; access to course webpage mandatory; need not be bilingual to enroll. Technical instruction, analysis, and theoretical discussion of bilingual creative expression through genre of short fiction. Bilingualism as both politics and aesthetics to be central theme. Discussion and analysis of Chicana/Latina/Latino short story collections. Peer critique of weekly writing assignments. Emphasis on individual growth such as characterization, plot, conflict, setting, point of view, and dialogue, and magical realism as prevailing Chicana/Latina/Latino theme. Some attention to process of manuscript preparation, public reading, and publication. Letter grading.

M136. Censored! Art on Trial. (4) Same as Lesbian, Gay, Bisexual, Transgender, and Queer Studies M136L. Lecture, four hours. Examination of censorship in visual arts, particularly art of queer Chicana/Chicana and Latino/Asian artists such as Alma Lopez, Lester Hernández, and Alex Doris. Other censored artists include feminist artist Yolanda Lopez, queer artists Robert Mapplethorpe and David Wojnarowicz, painter Christ Ofili, photographers Sally Mann and Andres Serrano, printmaker Enrique Chagoya, and former Noni Olabi, writer Salman Rushdie, and four performance artists—Karen Finley, Tim Miller, John Fleck, and Holly Hughes—whose work was vetoed by chair of National Endowment for Arts (NEA) in 1990 after they had successfully passed through NEA’s peer review process and who came to be known as NEA Four. P/NP or letter grading.

138A. Space, Place, and Race. (4) Seminar, four hours. Investigation of theories of spatial formation and structures of place in 20th century, with focus on the U.S. Theories of space and place from interdisciplinary list of readings to investigate ways racial formation is embedded in property, maps, streets, and buildings. Themes include settlement patterns, belonging, identities, and boundaries, and transgression. How space has shaped racial formation in multicultural pluralities. Investigation of space, place, and action operate in maps, built environment, and multimedia world. P/NP or letter grading.

138B. Barrio Suburbanism. (4) Seminar, four hours. Exploration of suburbanization, in which Chicanas/Chicanos/Latinas/Latinos impact working- and middle-class suburbs to reshape geography of metropolitan centers. Building upon urban studies of video production course, with emphasis on role of barrio, how suburban forms operate in multiracial and regional context. Points of intersection and conflict that illuminate how Chicana/Chicano and Latina/Latina populations harness cultural, social, and political contours of suburbs in Los Angeles metropolitan region. Major themes include urban policy, planning history, mapping, immigration, relational real estate formation, and pursuit of regional democracy. P/NP or letter grading.

M139. Topics in Chicana/Chicana and Latina/Latino Literature. (5) Same as English M191B.) Seminar, three or four hours. Enforced requisite: English Composition 3 or 3H. Variable specialized studies course in Chicana/Chicana and/or Latina/Latina literature. Topics may include labor and literature; Chicana/Chicana visions of Los Angeles; immigration, migration, and identities; and historical change; Chicana/Chicana journalism; literary New Mexico; specific literary genres. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M140A. Diasporic Nonfiction: Media Engagements with Memory and Displacement I. (4) Same as African American Studies M170A.) Seminar, three hours. Enforced requisite: English Composition 3 or 3H. Variable specialized studies course in Chicana/Chicana and/or Latina/Latina literature. Topics may include labor and literature; Chicana/Chicana visions of Los Angeles; immigration, migration, and identities; and historical change; Chicana/Chicana journalism; literary New Mexico; specific literary genres. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M140B. Diasporic Nonfiction: Media Engagements with Memory and Displacement II. (4) Same as African American Studies M170B.) Seminar, three hours. Enforced requisite: course M140A. Students complete 20- to 30-minute video projects about issues or experiences central to everyday lives of collectives of diasporic peoples. They write, record, edit, and distribute one socially engaged nonfiction video and draw on their experiences from course M140A in writing voiceover, choreographing dances, designing public performances, interviewing, and recording everyday life. P/NP or letter grading.

C141. Chicana and Latin American Women’s Narrative. (4) Lecture, four hours. Preparation: reading knowledge of Spanish (level 4). Analyses, comparisons, and discussions of written and visual art production of U.S. Chicana writers and their Latin American counterparts in English and Spanish, with particular focus on how each group deals with gender, social, and class issues. Concurrently scheduled with course C251L. Letter grading.
142. Mesoamerican Literatures. (4) Lecture, four hours. Preparation: reading knowledge of Spanish (level 4). Survey of premises of Mesoamerican literatures, including myths, lyrics, poetry, religious celebrations, rituals, and drama, specifically of Aztec and Mayan peoples prior to European contact. Letter grading.

143. Mestizaje: History of Diverse Racial/Cultural Roots of Mexico. (4) Lecture, four hours; discussion, one hour (when scheduled). Historical examination of diverse cultural roots of Chicanos and Chicanas. Utilizing theoretical frameworks of mestizaje, Aztlán, indigenismo, La Raza Cósmica, and la tercera línea, this course explores important groups who have contributed to the formation of Mexican national culture. Development of race relations in Mexico during colonial period, with focus on analysis of Nahua (Aztec), Mixtecs, Spaniards, and African slave population. Analysis of Asian immigration to Mexico and California during national period, specifically examination of migration and adaptation experiences of Chinese, Japanese, and Indian-Indian immigrants. P/N/P or letter grading.

M144. Women's Movement in Latin America. (4) (Same as Gender Studies M144 and Labor and Workplace Studies M144.) Lecture, four hours. Course on women's movement in Latin America and Caribbean to examine diverse social movements and locations from which women have launched political and gender struggles. Discussion of forms of femininity and mothering consciousness that emerged out of indigenous rights movements, environmental struggles, labor movements, chicana-based communities, peasant and rural organizing, and new communities that are concerned with race, sexuality, feminism, and human rights. Through comparative study of women's movements in diversification of political systems as well as national and transnational arenas, this course gains understanding of historical contexts and political conditions that give rise to women's resistance, as well as major debates in field of study. P/N/P or letter grading.

M145A. Introduction to Chicana/Latina Literature: Literature to 1960. (4) (Same as Spanish M154A.) Lecture, three hours. Requisite: Spanish 25 or 27. Introduction to texts representative of Chicana literary heritage. Sampling of genres, as well as historical and geographical settings and points of view characteristic of work written by Chicanos during 20th century. Most required reading in Spanish. Bilingual and English work are required. Reading analysis of number of important scholarly and critical statements pertaining to characteristics and development of Chicana literary corpus. Letter grading.

M145B. Literature of Chicana/Chicano Movement. (4) (Same as Spanish M145B.) Lecture, four hours. Requisite: Spanish 25 or 27. Examination of literature of Chicana/Chicano movement covering period from first manifestations of Chicano artistic production in 1965 with el Teatro Campesino through rise of women's writing, including work by Cherrí Moraga (1983), Helena Maria Viramontes (1985), and Sandra Cisneros (1991). P/N/P or letter grading.

M146. Chicano Narrative. (4) (Same as Spanish M155A.) Lecture, four hours. Enforced requisite: Spanish 25 or 27. Introduction to major Chicano narrative genres—novel, romance, satire, autobiography, cronico/semblanza, Chicana detective novel, and Chicana solidarity fiction. Texts examined within their own geographic, cultural, and historical contexts, as well as within history of narrative forms. P/N/P or letter grading.

CM147. Transnational Women's Organizing in Americas. (4) (Same as Gender Studies M147C.) Lecture, four hours. Feminist theories of transnational organizing. Examination of gender and race as central to processes of globalization and essential to economic and political struggles encompassed in transnational power relations. Exploration of how questions of race and gender influence global economic policies and transnational organizing. Examination of women's role in social movements. In time when people, capital, cultures, and technologies cross national borders with growing frequency, discussion of process of accelerated globalization has been linked to feminization of labor and migration, environmental degradation, questions of diaspora, sexuality, and cultural displacement, as well as growing global militarization. Problems and issues created by globalization and cultural, social, and political processes are examined in terms of their location in larger social organization. Concurrently scheduled with course C215. P/N/P or letter grading.


149. Gendered Politics and Chicana/Latina Political Participation. (4) Lecture, four hours. Examination of Chicanas and Latinas as participants, organizers, and leaders in communities, workplaces, labor unions, and government. Survey of Chicanas/Latinas in politics and as policymakers in appointed and elected offices. Analysis of gendering of politics and political behavior. Letter grading.

150. Affirmative Action: History and Politics. (4) Lecture, four hours; discussion, one hour (when scheduled). Historical, political, and economic context in which affirmative action policies and programs were conceived and implemented. Review of impact on Chicanos/Chicanas, Latinos/Latinos, and other communities of admissions, hiring and contracting practices, and state initiatives. Letter grading.

151. Human Rights in Americas. (4) Lecture, four hours. International human rights law and U.S. foreign policy in context of historical, political, social, and legal issues and court decisions involving U.S. and its role and relations with governments and institutions throughout Americas. Contemporary development of regional and international law, institutions, law, and norms related to promotion and protection of human rights. P/N/P or letter grading.

152. Disposable People: U.S. Deportation and Repatriation Campaigns. (4) Seminar. Four hours. Examination of U.S. deportation campaigns targeted at Mexican and other Latin American workers, residents, and U.S.-born citizens. Addressing various periods of large-scale highly organized deportation and repatriation efforts after violent conquest of Mexican territories in 19th century, during economic and social panic of Great Depression in 1930s and Operation Wetback in 1950s and 1960s, examination of criminalization of Mexican and Latino immigrants, police and military tactics of federal government, and administrative and legal mechanisms and institutions that have been created to facilitate deportation. Provides grounded knowledge of U.S. deportation history to contextualize broader national debate about immigration reform that is occurring today. P/N/P or letter grading.

153. Central Americans in U.S. (4) Lecture, four hours. Interdisciplinary survey of social, historical, political, economic, educational, and cultural experiences of Central American immigrants and their children in U.S. Introduction to several temporary experiences and issues in U.S. Central American communities. With focus mostly on Guatemalan, Honduran, Salvadoran, and Nicaraguan immigrants and social structures that constrain individuals, as well as strategies and behaviors immigrants and their communities have taken to establish their presence and incorporate into U.S. society. How Central American identity has been constructed and how this identity incorporates into U.S. society. How Central American communities have taken to establish their presence and incorporate into U.S. society. How Central American identity has been constructed and how this identity incorporates into U.S. society. How Central American communities have taken to establish their presence and incorporate into U.S. society. How Central American identity has been constructed and how this identity incorporates into U.S. society. How Central American communities have taken to establish their presence and incorporate into U.S. society. How Central American identity has been constructed and how this identity incorporates into U.S. society. How Central American communities have taken to establish their presence and incorporate into U.S. society.
ing of specific historical periods and moments, such as Spanish Conquest, Mexican Period, American Conquest, Mexican Revolution, and Chicano Movement to excavate untold stories about women’s participation in and contribution to making of Chicana and Chicano history. P/NP or letter grading.

M159A. History of Chicano Peoples. (4) Same as History M151A. Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey lecture course on historical development of Mexican (Chicana) community and people of Mexican descent (Indio-Mestizo-Mulato) north of Rio through 17th, 18th, and 19th centuries, with special focus on labor and politics. Provides integrated understanding of change over time in Mexican community by inquiry into major formative historical forces affecting community. Social structure, economy, labor, culture, political organization, and interaction among various cultures. Emphasis on social forces, class analysis, social, economic, and labor conflict, ideas, domination, and resistance. Developments related to historical events of significance occur both in U.S. and Mexico. Lectures, special presentations, reading assignments, written examinations, library and field research, and submission of paper. P/NP or letter grading.

M159B. History of Chicano Peoples. (4) Same as History M151B. Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey lecture course on historical development of Mexican (Chicana) community and people of Mexican descent in U.S. through 20th century, with special focus on labor and politics. Provides integrated understanding of change over time in Mexican community by inquiry into major formative historical and policy issues affecting community. Within framework of domination and resistance, discussion deals with social structure, economy, labor, culture, political organization, and ideology. Developments related to historical events of significance occurring both in U.S. and Mexico. Lectures, special presentations, reading assignments, written examinations, library and field research, and submission of paper. P/NP or letter grading.

160. Introduction to Chicana/Chicana Speech in American Society. (4) Lecture, three hours. Survey course presenting (1) basic elements of Chicano language use, including history of Chicana language use, types and social functions of Chicano speech (pa-chuco, caló, Spanglish), sexist language, and multilingualism and monolingualism and (2) major social issues related to the language use by Chicanas and other urban ethnic populations. Letter grading.

161. Chicana and Chicano Rhetoric. (4) Lecture, four hours. Examination of speeches and other public discourses that made history of Chicano community associated with political and social movements, using field of rhetoric (study of public speech and persuasion). Development of public speaking skills and abilities. P/NP or letter grading.


164SL. Oral History: Latino New Immigrant Youth. (3) Formerly numbered M164SL.) Seminar, three hours; tutoring, and one half hours. Theory, methodology, and practice of oral history, together with background information on Latino immigration to U.S. Readings include oral histories of Latino immigrants. Letter grading.

165. Latinos and Latinas in Public Education. (4) Lecture, four hours. Examination of language issues pertaining to Chicana community and contemporary problems circulating Chicana/Chicana education. Central focus to offer Freirian alternative to answer theoretical, methodological, practical, and policy questions about schooling of Chicanas/Chicanos in U.S. P/NP or letter grading.

167SL. Taking It to Street: Spanish in Community. (5) Same as Spanish M167SL.) Seminar, three hours; fieldwork, 10 hours. Enforced requisites: Spanish 25 or 27. Service learning course to give students opportunity to use cultural and linguistic knowledge acquired in Spanish classes in real-world settings. Focus on developing empathy, cultural and social identity, and multilingualism. Field project involving Spanish-speaking adults in adult literacy programs. P/NP or letter grading.


168B. Latinos: Television News. (4) Lecture, four hours. Requisite: course 168A. Study of multimodal (visual, audio, textual) images disseminated by television news programs to learn how nation comes to their understanding of Latinos. Development of critical visual interpretive acuity through semiotics training and analysis of actual television news stories. Letter grading.

169. Representations of Indigenous Peoples in Americas. (4) Lecture, four hours. Strongly recommended prerequisite: course 101. Introduction to different forms of representation of indigenous peoples and their presence in Americas, with emphasis on Mesoamerica and Andes. How indigenous images are expressed, perceived, and constructed at point of contact with Europeans during development of indigenous and in current period. Discussion of how these relate to Chicana/Chicana identity construction. Letter grading.

M170S. Latinos, Linguistics, and Literacy. (5) Same as Spanish M172SL.) Seminar, four hours; field project, four to six hours. Recommended requisite: Spanish 100A. In-depth study of various topics related to literacy, programs for adult preliterates, literacy and gender, approaches to literacy (whole language, phonics, Freire’s liberation pedagogy), history of writing systems, phoneme as basis for alphabetic writing, and national literacy campaigns. Required field project involving Spanish-speaking adults in adult literacy programs. P/NP or letter grading.

171. Humor as Social Control. (4) Lecture, four hours. Hegemony has fundamentally more powerful people against those with less power. In this case laughter becomes weapon used against Latinos and immigrants. With rise of Latinos in last decade, there has been growth of anti-Latino humor. Historical dynamics and geoglyphs of telling jokes about them and how to apply them in education. Letter grading.

172. Chicana and Chicano Ethnography. (4) Lecture, four hours. Culture change theory encompasses such issues as assimilation, colonialism, modernization, urbanization, migration, and acculturation. Examination of methods anthropologists/ethnographers use in studying and analyzing culture change within Chicano community. Include technological development and evolution, Indian nation-states, miscegenation, peasantries, expansionism, industrialization, immigration, ethnicity, and adaptation. Field project on some aspect of culture change required. P/NP or letter grading.

M173. Nonviolence and Social Movements. (4) Same as African American Studies M173 and Labor and Workplace Studies M173.) Lecture, three hours; discussion, one hour. Overview of nonviolent and its impact on social movements both historically and in its present context in contemporary society, featuring lectures, conversations, films, readings, and guest speakers. Exploration of some historic contributions of civil rights struggles and role of nonviolent action throughout recent U.S. history. Examination of particular examples of nonviolent movements as they impact social change organizing in Los Angeles. P/NP or letter grading.

M174A-M174B. Restoring Civility: Understanding, Using, and Resolving Conflict. (4) (Same as Education M174A-M174B.) Lecture, four hours. Course M174A is enforced requisite to M174B. Designed for students who want to learn principles of dialogue and dialogic alternatives to violence, and practice how to apply them in educational settings. In Progress (M174A) and letter (M174B) grading.

M174C. Alternatives to Violence: Peer Mediation in Public Schools. (4) Same as Education M145C.) Lecture, one hour; fieldwork, three hours. Requisite: courses M174A, M174B. Limited to juniors/seniors. Application of student knowledge and experience to development of peer mediation programs to be sustained by future UCLA students. Work at partner school sites and demonstration of firm grasp of concepts of conflict resolution through weekly reflection sessions, as well as biweekly meetings, and final journal entry. Application of critical thinking, review of literature from earlier courses, and reflection on student field experiences to help develop understanding of causes of violence, and what schools can do to mitigate it. Letter grading.


176. Globalization and Transnationalism: Local Historical Dynamics and Praxis. (4) Lecture, four hours. Analysis of dynamics of Chicana/Chicano transnational community formation in comparative global perspective, explored both as historical result of and key future actor in localized dynamics of transnationalization in California’s relation to world. Analysis of Chicana/Chicana experience in California as both highly linked node and local microcosm of globalized nation that is both affected by and as well as influences course of alternative scenarios of globalization. Designed to help students develop critical political economy analysis of interplay between globalization and local level dynamics that together are giving meaning to and constructing new social identities and strategies for struggle throughout world. P/NP or letter grading.

C177. Latino Social Policy. (4) Formerly numbered LA 177.) Lecture; three hours. Examination of social welfare of Latinos (Chicanos, Puerto Ricans, and Cubans) in U.S. through assessment and critical analysis of social policy issues affecting them. Survey of social, economic, cultural, and political circumstances affecting ability of Latinos to access public benefits and human services. Concurrently scheduled with course C277. Letter grading.


C178. Language Policy and Policies in U.S.: Comparative History. (4) Formerly numbered CM178.) Lecture, four hours. Historical overview of national and institutional language policies, especially Spanish/Latina. Latina, Chicano and Chicana community, legal, and political constraints on bilingualism. Definitions and development of policy language and planning, history of general and educational language policy, in U.S., demography and policies of language diversity, and current language and educational policy
issues in U.S. Comparisons with selected interna-
tional cases. Concurrently scheduled with course
C274. P/NP or letter grading.

180. Chicana/Chicano Schooling and Community
Activism. (4) Seminar, four hours. Overview of Chi-
cana/Chicano schooling issues in U.S., with special
emphasis on several important historical events that
exemplify struggle for educational justice and equity
that affected Chicana/Chicano education—Mendez
versus Westminster (1947) desegregation case and
1968 high school Chicana/Chicana student walkouts.
Through oral history projects, documentation of
legacy of Sylvia Mendez, who experienced segrega-
tion in one of California’s major cities, Sal Carman,
chicano teacher and central figure in 1968 walkouts,
and Chicano Youth Leadership Conference (CYLC).
Ex-
ahmination of how historical, social, and political forces
have impacted Chicana/Chicana educational experi-
ences, P/NP or letter grading.

181. History of Chicana/Chicana Los Angeles, 20th
Century. (4) Lecture, four hours. History of Mexican
American people in 20th-century Los Angeles. Read-
ings and lectures emphasize formation of regional
identity among Mexican Americans in Los Angeles
and their significance to emergence of multicultu-
ral metropolis. Letter grading.

CM182. Understandings of Whiteness in American
History and Culture. (4) (Same as History M151C.)
Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. History,
construction, and representation of whiteness in American
history and discusses the role evolution of white identity and explore its significance to
to historical construction of race class in American
history. Concurrently scheduled with course C256.
Letter grading.

M183. History of Los Angeles. (4) (Same as History
M155.) Lecture, three hours; discussion, one hour
(when scheduled). Designed for juniors/seniors. So-
cial, economic, and political developments in Los
Angeles and its environs from time of its founding
to present. Emphasizes on diverse peoples of area,
changing physical environment, various interpreta-
tions of city, and Los Angeles’ place among American
urban centers. P/NP or letter grading.

184. History of U.S./Mexican Borderlands. (4) Le-
course, four hours. Survey of historic and geographic di-
versity of Chicana/Chicana identity and culture, with
emphasis on regions of California, Arizona, New Mex-
ico, and Texas in Spanish/Mexican borderlands
as situated within U.S. national context. Letter
grading.

M185. Whose Monument Where: Course on Public
Art. (4) (Same as Art M185 and World Arts and Cul-
tures M126C.) Lecture, four hours. Requisite:
course M186A, M186B, or M186C. Ex-
amination of public art in U.S. as basis for cultural
illumination of America’s histories from perspec-
tive of artist. Use of urban Los Angeles as
textbook in urban space issues such as who is public,
what is public space at end of 20th century, what de-
fines neighborhoods, and do different ethnic popula-
tions use public space differently. P/NP or letter
grading.

M186A. Beyond Mexican Mural: Beginning Mural-
ism and Community. (4) (Same as Art M186A and
World Arts and Cultures M125A.) Studio/
lecture, four hours. Corequisite: course M186AL. In-
vitation of muralism as method of community edu-
cation, development, and empowerment. Exploration
of issues through development of large-scale collabo-
ration digitally created image and/or painting for
placement in community. Students research, de-
sign, and work with community participants. Continu-
ation of project through stages of pro-
duction to full scale and community approval. P/NP or
letter grading.

M186C. Beyond Mexican Mural: Advanced Mural-
ism and Community Development. (4) (Same as Art
M186C and World Arts and Cultures M125C.) Studio/
lecture, six hours. Requisites: courses M186B, M186BL.
Corequisite: course M186CL. Continuation of
investigation of muralism as method of community
development and empowerment. Explora-
tion of issues through development of large-scale
collaborative digitally created image and/or painting
for placement in community. Students research,
design, and work with community participants. Connu-
ition of project through installation, documentation,
and, with dedication, on work on more advanced inde-
dependent projects. P/NP or letter grading.

M187. Latino Metropolis: Culture and Urbanism
in Americas. (4) (Same as History M151E and
Urban Planning M151E.) Lecture, four hours. Intro-
duction to history of architecture and urbanism in
Americas, from fabian vision to barrios of 21st-century
Los Angeles and Miami. Emphasis on role of cities in Latino/Latino experience and uses
of architecture and city planning to forge new social
identities rooted in historical experiences of conquest,
immigration, nationalization, and revolution. P/NP or
letter grading.

188. Special Courses in Chicanas and Chicano
Studies. (4) Seminar, three hours. Some sections
may require prior coursework as a stron-
sponsored experimental or temporary courses, such as
those required by visiting faculty members. May be
repeated for credit. P/NP or letter grading.

190. Research Colloquia in Chicana and Chicano
Studies. (2) Seminar, two hours. Students and instruc-
tors undertake supervised tutorial research
in seminar setting with one or more faculty members
to present reports, discuss research meth-
odologies, share findings, and provide feedback on
each other’s work. Culminates in public seminar
of Chicana/Chicana student research at which students
expected to present polished position papers on their
research. May be repeated for credit. P/NP grading.

191. Variable Topics Research Seminars: Chica-
a and Chicano Studies. (4) Seminar, three hours.
Limited to juniors/seniors. Research seminar organized
around readings and engaged discussion of critical topic in area of interest. Exploration of issue, theo-
retical implication for field, and practical implications
for communities. Final research project required. May be repeated for credit. P/NP or letter grading.

192A. Undergraduate Practicum in Chica-
a and Chicano Studies. (4) Seminar, four hours. Limited to junior/seniors. Training and supervised prac-
ticum for advanced undergraduate students who assist in
preparation of materials and development of inno-
vative programs or courses of study under guidance
of faculty members in small group settings or on-one-
one settings. May not be applied toward departmental
departmental major or minor elective require-
ments. May be repeated for credit. P/NP or letter grading.

193. Readings/Speaker Series Seminars: Chica-
a and Chicano Studies. (1) Seminar, one hour. Limited
to undergraduate Colloquia Series students. Reading
of journal articles associated with speaker topics
and enrichment postcolloquium discussions. May not be
applied toward departmental major or minor elective
requirements. May be repeated for credit. P/NP grading.

194. Research Group Seminars: Chicanas and
Chicanos. (2) Seminar, one hour. Limited to
undergraduate students who are part of research
group. Discussion of current literature in field or of re-
search of faculty members or students. Use of spe-
cific research method on selected topic. May be re-
peated for credit with topic change. P/NP grading.

195. Community Internships in Chicanas and
Chicanos. (4) Tutorial, two hours; field place-
ment, eight hours. Limited to juniors/seniors. Intern-
ship in supervised setting in community agency
or business. Students meet on regular basis with
instructor and provide periodic reports of their experi-
ence. May be repeated for credit. Individual contract with supervising faculty member required. P/NP or
letter grading.

M195CE. Comparative Approaches to Community
and Corporate Internships. (4) (Same as African
American Studies M195CE, American Indian Studies
M195CE, and American Studies M195CE.) Tutorial,
one hour; field work, eight to ten hours. Limited to juniors/seniors. In-
ternship in corporate, governmental, or nonprofit set-
tings coordinated through Center for Community
Learning. Comparative study of race, gender, and in-
digeneity in relation to contemporary workplace dy-
namics. Students complete weekly written assign-
ments, attend biweekly meetings with graduate stu-
dent coordinator, and write final research paper.
Faculty sponsor and graduate student coordinator constitute a team of readings assignments that examine
issues related to internship site. Individual contract with supervising faculty member required. P/NP or
letter grading.

196. Research Apprenticeship in Chicanas and
Chicanos. (2 to 4) Tutorial, three hours per week
per unit. Requisites: course 10A or 10B. Limited to ju-
nior/seniors. Entry-level research apprenticeship for
upper-division students under guidance of faculty
mentor. Participation in all aspects of research
project, including library research, reading materials,
and compilation of data, with scheduled meetings
throughout term with faculty mentor for discussion of project. May not be applied toward departmental
major or minor requirements. May be repeated under
different contract; consult department. Individual con-
tract required. P/NP grading.

197. Individual Studies in Chicanas and
Chicanos. (2 to 4) (Undergraduate only). Requisites:
courses 10A, 10B. Limited to juniors/seniors. Indi-
vidual intensive study, with scheduled meetings to be
arranged between faculty member and student. As-
signed reading and tangible evidence of mastery of
subject matter required. May be repeated for max-
imum of 8 units. Individual contract required. P/NP or
letter grading.

198. Individual Capstone Studies. (2) Tutorial, one
hour. Requisites: courses 10A and 10B, or 101. Lim-
ited to departmental junior/senior majors. Guided
study led by faculty supervisor. Instructor meets with
student to help design culminating project so it con-
torms to departmental capstone project

guidelines. Must be taken in conjunction with one
upper-division departmental course. May not be re-
peated for credit. Individual contract required. Letter
grading.

198A-198B-198C. Honors Research in Chicana
and Chicano Studies. (2) (Each) Tutorial, four hours.
Limited to juniors/seniors. Entry-level research ap-
prenticeship for upper-division students under guid-
ance of faculty mentor. Participation in all aspects of re-
search project, including library research, reading
materials, and compilation of data, with scheduled meetings
throughout term with faculty mentor for discussion of
project. May not be applied toward departmental
major or minor requirements. May be repeated under
different contract; consult department. Individual con-
tract required. P/NP grading.

C212. Latina/Latino Families in U.S. (4) Lecture, four hours; discussion, one hour (when scheduled). Study of how intersections of race, class, and gender shape experiences of Latina/Latino families in U.S. sweaty and other intersections also help shape individual experiences within families. Examination of family, race, class, and gender as sociological concepts, and analyses of experiences of diverse Latina/Latino groups in U.S. with special emphasis on immigrants, and analysis of how race, class, and gender together play important roles in shaping these experiences. Discussion of roles of structure and space for agency in each context. Currently scheduled with course C107. Letter grading.

M213. Asian-Latinos. (4) Same as Asian American Studies M213.) Seminar, three hours. Limited to graduate students. Exploration of critical theoretical and conceptual frameworks in field of Chicana and Chicano studies. Discussion of changes that have taken place around four key theoretical areas—coloniality, nationhood, in- equalities, and studies, and genders and sexualities. S/U or letter grading.

201. Activist Scholarship and Intersectional Methodologies Seminar. (4) Seminar, three hours. Limited to graduate students. Exploration of critical epistemologies, or schools of thought, that employ intersectional methodologies as basis for social action research—Chicana/Chicano cultural studies, Chicana feminism, queer studies, and critical legal studies. S/U or letter grading.

202. Qualitative Methods in Study of Chicanas/Chicanos and Latinas/Latinos. (4) Seminar, three hours. Limited to graduate students. Methods course that takes students through entire empirical research cycle. Students required to collectively develop inter- esting research questions, conduct qualitative re- search, analyze original data, and write final papers that contextualize findings within existing social scientific literature. To answer research questions, stu- dents select from theoretical frameworks discussed in readings. S/U or letter grading.

208. Research Design and Methods in Chicana and Chicano Studies Seminar, four hours. Research design and methods in Chicana Studies, including critical historical review of prior research directions and methodologies leading to need for Chicana/Chicano studies. Focus is on qualitative research design, data collection methods, data analysis methods, and reporting in quantitative, qualitative, and mixed methods research in Chicana/Chicana studies. S/U or letter grading.

209. Service Learning: Theory and Praxis. (4) Seminar, three hours. Limited to graduate students. Examining of approaches and theories that underpin service learning and exploration of ways in which service learning can be utilized in various of academic disciplines (second and foreign language instruction, educ- ation, ethnic studies, labor studies, women's studies, public health, literature, public art, policy science, etc.). Creation of research proposal for use of service learning in a course (real or hypothetical) in aca- demic discipline of student's choice. S/U or letter grading.


214. Chicana Feminism. (4) Same as Gender Studies CM232A) Lecture, four hours. Enforced re- quisite: course 10A or Gender Studies 10. Examination of theories and practices of women who identify as Chicana feminist. Analysis of writings of Chicanas who do not identify as feminist but whose practices attend to gender inequities faced by Chicanas both within Chicana and Chicano communities and dominant so- ciety. Analysis to Anglo-European and Third World women. Currently scheduled with course CM110. S/U or letter grading.


219A. New Social Media and Activist Art. (4) Seminar, three hours. Limited to graduate students. Hands-on learning and production experience as essential to full understanding of modern media. Promotion of prag- matic style of humanistic and social scientific scholar- ship that prepares students to think critically and pro- ductively about media form, content, and context while learning to effectively use social media. S/U or letter grading.

234. Chicana and Chicano Studies / 229
CIVIC ENGAGEMENT
Interdisciplinary Minor
College of Letters and Science
A265 Murphy Hall
Box 951571
Los Angeles, CA 90095-1571
310-825-7867
dbarrera@college.ucla.edu
http://www.ucla.edu/civicminor.htm

Michael C. Lens, PhD, Chair
Faculty Committee
Joel D. Abetbich, PhD (Political Science, Public Policy)
Barbara Drucker, MFA (Art)
Michelle F. Eral, PhD (Gender Studies)
Jennifer A. Jay, PhD (Civil and Environmental Engineering)
Michael C. Lens, PhD (Urban Planning)
Reynaldo F. Macias, PhD (Chicana and Chicano Studies, Education)
Meredith Phillips, PhD (Public Policy, Sociology)
Robert Chao Romero, JD, PhD (Asian American Studies, Chicana and Chicano Studies)
Olga T. Yokoyama, PhD (History)
David K. Yoo, PhD (American Asian Studies)

Scope and Objectives
The Civic Engagement minor is designed to provide students with a core analytical, experimental, and theoretical framework for understanding issues of community building, governance, and the use of civic resources. It examines the connections between individual success and societal structures, while exploring traditions of service and the history of civic movements. The minor can be paired with any major as an applied and active way of putting disciplinary tools to use and is intended for highly motivated students of any ideological perspective who are committed to education among a broader community of learners.

Students complete a core curriculum, elective courses, an internship, and a capstone project involving research on a civic issue. Three internship programs are available: local Los Angeles area internships, state internships through the University of California Center in Sacramento (UCCS) program, and national internships through the Center for American Politics and Public Policy (CAPPP) program in Washington, DC.

Undergraduate Study
Civic Engagement Minor
The Civic Engagement minor integrates local, state, and national internships with an academic context that enriches the valuable learning gained through meaningful work. To enter the minor, students must (1) have an overall grade-point average of 2.7 or better, (2) submit a completed application endorsed by a faculty sponsor, and (3) submit a written statement describing how civic engagement relates to their academic interests or career goals. Applications are available in A265 Murphy Hall.

Students who complete the minor with a grade-point average of at least 3.5 in their minor coursework, an overall GPA of 3.5, and...
Civic Engagement 198 for their capstone experience qualifies for graduation with College Honors.


Required Upper-Division Internship Courses (12 to 14 units): Students must select from either local, state, or national internship locations as follows:

**Local Los Angeles area internships** span three consecutive terms at the same internship location. Students enroll in three consecutive terms of Civic Engagement 195CE. Placements are selected in consultation with the Center for Community Learning minor coordinator and are based on both student interest and faculty recommendations.

State internships span one term through participation in the University of California Center Sacramento (UCCS) program during fall, winter, spring, or summer quarter. Students must enroll in a minimum of 14 units of upper-division courses to satisfy the internship requirement. Applications for the UCCS program are available on the UCCS website.

National internships span one term through participation in the Center for American Politics and Public Policy (CAPPP) program in Washington, DC. In the fall or spring quarter program, students enroll in History/Political Science/Sociology M191DC and M195DC; in the winter quarter program, students enroll in History/Political Science/Sociology M194DC and M195DC plus one 4-unit elective course. Students must enroll in a minimum of 12 units of upper-division courses to satisfy the internship requirement. Applications for the CAPPP program are available on the CAPPP website.

Required upper-division Capstone Courses (6 units): Civic Engagement 194 with a grade of B or better; one elective course in courses 198 or 199. Prior to enrolling in course 198 or 199, students must complete Civic Engagement 194 and all other requirements for the minor, with the exception of the three-term local internship which may be completed concurrently with the capstone course. The capstone experience for the minor requires an integrative final paper or project that incorporates the required curriculum and elective course experience with academic context. Acceptable placements include corporate, nonprofit, and governmental organizations that meet criteria for undergraduate internships as established by the Center for Community Learning. May be repeated once for credit.

**Civic Engagement Lower-Division Courses**

10. Introduction to Engaged Scholarship. (2) Seminar, two hours. Limited to students participating in preapproved UCLA civic engagement programs. Introduction to history, research, and philosophy of general University/community partnerships, as well as specific process, content, and active engagement by undergraduates at UCLA. Offered in spring only. Pass/No Pass grading.

18. Bruin Leaders: Model for Social Change. (1) Lecture, two hours; fieldwork, one hour. Introduction to leadership development and civic engagement through community service. Based on nonhierarchical mode of leadership developed by UCLA Graduate School of Education and Information Studies. Topics include diversity issues, organizational skills and team-building development, and personal growth and community service goals. Participation in first-week orientation session required. Consult Schedule of Classes for topics to be offered in specific term. May not be repeated for credit. Pass/No Pass grading.

505SL. Engaging Los Angeles. (6) Lecture, two hours; discussion, two hours. Service learning course with focus on diverse communities of Los Angeles. Analysis of general shared history of Los Angeles. Comparing or contrasting of experiences of several different racial/ethnic groups. Engagement in meaningful off-campus to reflect on assets, injustices, and inequities that have shaped experiences of native or immigrant communities. Analysis of Los Angeles in which residents coexist and interact while managing tensions and social justice issues inherent in majority city. Letter grading.

95A-95B. Introduction to Community-Based Internships. (2-4) Tutorial, one hour; fieldwork, four hours (course 95A) and 10 hours (course 95B). Course 95A is not repeatable. Course 95B, Introduction to community-based work for third-term seniors; application required. Study of history, philosophy, and book club culture, or science fiction and science policy. Service-learning component includes meaningful work with local nonprofit organizations selected in advance by instructor. May be repeated for credit with topic change. Pass/No Pass or letter grading.

M115SL. Community-Based Studies of Popular Literature. (6) (Same as English M115SL.) Lecture, four hours; discussion, one hour (when scheduled); fieldwork, two hours. Letter grading.

102. Reflections on Alternative Spring Break. (2) Seminar, two hours. Limited to students who have participated in USAC Community Service Commission Alternative Spring Break immediately prior to Spring Quarter. Discussion of role of higher education initiatives in civic identity formation, with specific attention to reflection on Alternative Spring Break experiences. Pass/No Pass or letter grading.

105SL. Client-Based Program Evaluation and Research. (4) Seminar, three hours; fieldwork, 10 hours. Limited to juniors/seniors. Service learning course for undergraduate students and community partners through which students practice and critique evaluation of program evaluation. Evaluation of nonprofit organizations in Los Angeles by research teams. Offered in summer only. Letter grading.

108SL. Introduction to Early Childhood Education: Civic Engagement Perspectives. (4) Lecture; three hours; fieldwork; eight hours. Limited to students who are participating members of Jumpstart AmeriCorps literacy program. Service learning course on early childhood development and civic engagement. Overview of child development theory as examined through the lens of child care and workplace experiences as established by Center for Community Learning. Include corporate, nonprofit, and governmental organizations that meet criteria for undergraduate internships as well as those from all majors who are interested in theories and concepts of civic engagement within undergraduate education. Letter grading.

110. Civic Engagement / 231 (For-
ners selected in advance by instructor and Center for Community Learning. May be repeated for credit with topic or instructor change. Letter grading.

145. Conflict, Power, Inequality, and Change. (4) Lecture, four hours. Broad historic trend of systems in conflict such as colonialism, capitalism, urbanism, and neoliberalism. Examination of modalities and theories of conflict and transformation, with emphasis on three primary forms of societal conflict—social movements, war, and terrorism. Study of resource scarcity through two specific dimensions: how it is leveraged to meet political ends, and how it can be harnessed for conflict intervention, negotiation, transformation, and prevention. P/NP or letter grading.

150. Social Innovation Theory and Application. (4) Seminar, three hours. Limited to students in UCLA Summer Social Innovation Research Program. Study of social innovation as theory of civic engagement, with particular emphasis on how social innovators have transformed way we address entrenched social issues. Study of elements of existing social innovation models and strategies for employing methods of social change on campus and in communities. Offered in summer only. Letter grading.

152. Exploring Social Change: Critical Analysis through Lens of Community Organizing. (4) Lecture, four hours. Exploration of theories driving social change and how visions and agendas get organized toward common efforts. Analysis of organizing frameworks through specific movements for social, economic, and political change defined by Paulo Freire in Pedagogy of the Oppressed. Introduction to praxis defined by Paulo Freire in Pedagogy of the Oppressed as “refection and action directed at the structures to be transformed.” P/NP or letter grading.

163SL. Civic Engagement and Public Use of Knowledge: Special Topics. (5) Seminar, three hours; fieldwork, three hours. Limited to juniors/seniors. Service learning course that examines topics related to community partnerships and role of civic education in higher education. May be repeated for credit with topic or instructor change. Letter grading.

170SL. Food Studies and Food Justice in Los Angeles. (4) Seminar, three hours; fieldwork, two hours. Interdisciplinary service learning course that provides general understanding of access and equity issues related to food chain in Los Angeles. Exploration of social justice issues faced by residents of low-income communities. Reading of research from multiple disciplines, including but not limited to public health, environmental justice, and public policy. Service-learning component includes meaningful work with off-campus community partners selected in advance by instructor and Center for Community Learning. Letter grading.

M175SL. Addressing Social Determinants in Racial/Ethnic Minority Communities to Reduce and Prevent Health Disparities. (4) (Formerly numbered 175SSL) (Same as Psychology M175SL) Seminar, two hours; fieldwork, one hour. Examination of how addressing social determinants in racial/ethnic minority communities can reduce or eliminate physical and mental health disparities. Currently in racial and ethnic minority communities, health status of individuals can be function of income, exposure to pollutants and toxins, scarcity of supermarkets or stores with fresh produce and nutritional food, noise levels, and variety of other stressors and unhealthy conditions. Health interventions are often focused on individual-level change or increases in access to healthcare with little in way of changing risk environments. Designed to give students opportunity to understand how to address social determinants related to negative health outcomes in racial/ethnic minority neighborhoods and communities and to experience how to use social determinants literature in service of collaborative activities with community organizations. P/NP or letter grading.

180. Access to Justice: Hope and Reality. (4) Seminar, three hours. Limited to UCLA students who are members of JusticeCorps program through AmeriCorps. JusticeCorps was established as innovative approach to solving one pressing issue faced by courts around country today: providing equal access to justice. Examination of promise of justice system in America to provide meaningful access to courts for all who seek it. What premises underlie structure of U.S. legal system? Exploration of sociopolitical context for current legal system, including origins and current status of legal services and self-help movements, including role of JusticeCorps. Were these strategies designed to make promise of equal justice a reality or have they inadvertently, or intentionally, resulted in two-tiered legal system—one for those with means and another for those without? P/NP or letter grading.

194. Capstone Research Seminar. (4) Seminar, two hours. Requisite course 195CE. Required of students pursuing Civic Engagement minor. Integration of off-campus work with academic theories and concepts within field of civic engagement. Students report on their internship experiences and analyze relationship between their internship and issues of policy, ethics, systemic responses to community needs, or personal and intellectual transformations. Students identify one faculty mentor and develop proposal for required capstone research project. Letter grading.

194A. Astin Civic Engagement Research Seminar. (4) Seminar, three hours. Limited to students in Astin civic engagement spring training program. Integration of off-campus work with academic theories and concepts within field of civic engagement. Students report on their internship experiences and analyze relationship between their internship and issues of policy, ethics, systemic responses to community needs, or personal and intellectual transformations. Students identify one faculty mentor and develop proposal for civic engagement research project. Letter grading.

195. Community or Corporate Internships in Civic Engagement. (4) Tutorial, one hour; fieldwork, eight hours. Limited to juniors/seniors in Civic Engagement minor. Internship in supervised setting in corporate, governmental, or nonprofit setting, using knowledge base of civic engagement. Students submit weekly writing assignments and final paper that examine civic issues related to meaningful work at internship site. Students expected to learn ways in which individuals and groups can organize to solve problems, analyze issues, or bring about change in democratic society. Must be repeated for three consecutive terms to fulfill minor requirements. Individual contract with supervising faculty member required. Letter grading.

195CE. Community and Corporate Internships in Civic Engagement. (4) Tutorial, to be arranged; fieldwork, eight to 10 hours. Limited to juniors/seniors in Civic Engagement minor. Internship in supervised setting in corporate, governmental, or nonprofit setting coordinated through Center for Community Learning. Students complete weekly written assignments, attend biweekly meetings with graduate student coordinator, and write final research paper. Faculty sponsor and graduate student coordinator construct series of readings assignments that examine issues related to internship site. May be repeated for credit with consent of Center for Community Learning. Individual contract with supervising faculty member required. Letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, one hour; fieldwork, eight to 10 hours. Limited to juniors/seniors. Requisite course 195CE. Required of students pursuing College of Social Science honors. Development and completion of honors thesis or comprehensive research project under direct supervision of faculty mentor. May be repeated for credit. S/U grading.

Graduate Course

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

CIVIL AND ENVIRONMENTAL ENGINEERING

Henry Samueli School of Engineering and Applied Science

5731 Boelter Hall
Box 951593
Los Angeles, CA 90095-1593

310-825-1851
ccehelp@seas.ucla.edu
http://www.cee.ucla.edu

Jonathan R. Stewart, PhD, PE, Chair
Scott J. Brandenberg, PhD, PE, Vice Chair
Steven A. Margulis, PhD, Vice Chair

Professors

J.R. DeShazo, MSc, PhD
Jennifer A. Jay, PhD
Jiann-Wen Ju, PhD, PE
Dennis P. Lettermaier, PhD
Steven A. Margulis, PhD
Michael K. Stenstrom, PhD, PE
Jonathan P. Stewart, PhD
Ergun Dogru, PhD
Mladen Vucetic, PhD
John W. Wallace, PhD
William W.-G. Yeh, PhD, NAE (Richard G. Newman)

AE.COM Endowed Professor of Civil Engineering

Emeriti

Stanley B. Dong, PhD, PE
Lewis P. Felton, PhD
Michael E. Fourney, PhD, PE
Gary C. Hart, PhD, PE
Richard L. Perine, PhD
Mosl F. Rubinstein, PhD
Lawrence G. Selna, PhD, SE
Keith D. Stolzenbach, PhD, PE

Associate Professors

Scott J. Brandenberg, PhD
Mekonnen Gebremichael, PhD
Shailly Mahendra, PhD
Gaurav Sant, PhD
Jian Zhang, PhD

Assistant Professors

Mathieu Bauchy, PhD
Henry V. Burton, PhD, SE
Timu W. Gallien, PhD
Sanjay K. Mohanty, PhD

Adjunct Professors

Robert Kayen, PhD, PE
Michael J. McGuire, PhD, PE, NAE
George Mylonakis, PhD, PE
Thomas A. Sabol, PhD, SE

Adjunct Associate Professors

Donald R. Kendall, PhD
Isam Najm, PhD, PE
Daniel E. Pradel, PhD

Adjunct Professors

Visiting Professor

Youssef Bozorgnia, PhD, PE

Scope and Objectives

The Department of Civil and Environmental Engineering programs at UCLA include civil engineering materials, earthquake engineering, environmental engineering, geotechnical engineering, hydrology and water resources
engineering, structural engineering, and structural mechanics.

The civil engineering undergraduate curriculum leads to a BS in Civil Engineering, a broad-based education in environmental engineering, geotechnical engineering, hydrology and water resources engineering, and structural engineering and mechanics. This program is an excellent foundation for entry into professional practice in civil engineering or for more advanced study. The department also offers the undergraduate Environmental Engineering minor.

At the graduate level, MS and PhD degree programs are offered in the areas of civil engineering materials, environmental engineering, geotechnical engineering, hydrology and water resources engineering, and structures (including structural/earthquake engineering and structural mechanics). In these areas, research is being done on a variety of problems ranging from basic physics and mechanics problems to critical problems in earthquake engineering and in the development of new technologies for pollution control and water distribution and treatment.

Undergraduate Study

The civil engineering program is accredited by the Engineering Accreditation Commission of ABET.

The Civil Engineering major is a designated capstone major. In each of the major field design courses, students work individually and in groups to complete design projects. To do so, they draw on their prior coursework, research the needed materials and possible approaches to creating their device or system, and come up with creative solutions. This process enables them to integrate many of the principles they have learned previously and apply them to real systems. In completing their projects, students are also expected to demonstrate effective oral and written communication skills, as well as their ability to work productively with others as part of a team.

Civil Engineering BS

Capstone Major

Preparation for the Major

Required: Chemistry and Biochemistry 20A, 20B, 20L; Civil and Environmental Engineering 1, M20 (or Computer Science 31); Mathematics 31A, 31B, 32A, 32B, 33A, 33B (or Mechanical and Aerospace Engineering 82); Physics 1A, 1B, 1C, 4AL; one natural science course selected from Civil and Environmental Engineering 58SL; Earth, Planetary, and Space Sciences 3, 15, 16, 17, 20, Environment 12, Life Sciences 1, 2, 7A, Microbiology, Immunology, and Molecular Genetics 5, 6, or Neuroscience 10.

The Major

Required: Chemical Engineering 102A or Mechanical and Aerospace Engineering 105A, Civil and Environmental Engineering 91, 102, 103, C104 (or Materials Science and Engineering 104), 108, 110, 120, 135A, 150, 153, Mechanical and Aerospace Engineering 103; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; and at least eight major field elective courses (32 units) from the lists below with at least two design courses, one of which must be a capstone design course and two of which must be laboratory courses. Courses applied toward the required course requirement may not also be applied toward the major field elective requirement.

Civil Engineering Materials: Civil and Environmental Engineering C104, C105, C182.

Environmental Engineering: Civil and Environmental Engineering 154, 155, 163, 164, M165, M166; laboratory courses: 156A, 156B; capstone design courses: 157B, 157C.

Geotechnical Engineering: Civil and Environmental Engineering 125; laboratory courses: 128L, 129L; design courses: 121, 123 (capstone).

Hydrology and Water Resources Engineering: Civil and Environmental Engineering 157A; laboratory course: 157L; design courses: 151, 152 (capstone).

Structural Engineering and Mechanics: Civil and Environmental Engineering 125, 130, 135B, M135C, C137, 142; laboratory courses: 130L, 135L, 142L; design courses: 141, 143, 144 (capstone), 147 (capstone).

Transportation Engineering: Civil and Environmental Engineering 180, 181, C182.

Additional Elective Options: Atmospheric and Oceanic Sciences 141, Earth, Planetary, and Space Sciences 100, 101, Environment 157, Mechanical and Aerospace Engineering 166C, M168.

For information on University and general education requirements, see the College and Schools chapter earlier in this catalog.

Environmental Engineering Minor

The Environmental Engineering minor is designed for students who wish to augment their major program of study with courses addressing issues central to the application of environmental engineering to important environmental problems facing modern society in developed and developing countries. The minor provides students with a greater depth of experience and understanding of the role that environmental engineering can play in dealing with environmental issues.

To enter the minor, students must be in good academic standing (2.0 grade-point average or better) and file a petition in the Office of Academic and Student Affairs, 6426 Boelter Hall.

Required Lower-Division Course (4 units): Mathematics 3C or 32A.

Required Upper-Division Courses (24 units minimum): Civil and Environmental Engineering 153 and five courses from 154, 155, 156A, M165, M166, Chemical Engineering C118, Environmental Engineering 159, 166, Environmental Health Sciences C125, C164.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor, and at least 16 units applied toward the minor must be taken in residence at UCLA.

Transfer credit for any of the above is subject to departmental approval; consult with the undergraduate counselors before enrolling in any courses for the minor.

Each minor course must be taken for a letter grade, and students must have a minimum grade of C (2.0) in each and an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Civil and Environmental Engineering offers Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Civil Engineering.

Civil and Environmental Engineering

Lower-Division Courses

1. Civil Engineering and Infrastructure. (2) Lecture, two hours; outside study, four hours. Examples of infrastructure, its importance, and manner by which it is designed and constructed. Role of civil engineers in infrastructure development and preservation. P/NP grading.


58SL. Climate Change, Water Quality, and Ecosystem Functioning. (B) Lecture, four hours; service learning, two hours; outside study, nine hours. Science related to climate change, water quality, and ecosystem health. Topics include carbon and nutrient cycling, hydrologic cycle, ecosystem structure and services, biodiversity, basic aquatic chemistry, and impacts of climate change on ecosystem functioning and water quality. Participation in series of science education projects to elementary or middle school audience. Letter grading.

91. Statics. (Formerly numbered 101.) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: Mathematics 31A, 31B, Physics 1A. Newtonian mechanics, vector representation, and resultant forces and moments. Free-body diagrams and equilibrium, internal loads and equilibrium in trusses, frames, and beams. Planar and nonplanar systems, distributed forces, determinate and indeterminate force systems, shear and moment diagrams, and axial force diagrams. Letter grading.

97. Variable Topics in Civil and Environmental Engineering. (2 to 4) Seminar, two hours. Current topics and research methods in civil and environmental engineering. May be repeated for credit. Letter grading.
Upper-Division Courses

102. Dynamics of Particles and Bodies. (2) Lecture, two hours; discussion, two hours; outside study, two hours. Requisite: course 91, Physics 1B. Introduction to fundamentals of dynamics of single particles, system of particles, and rigid bodies. Topics include kinematics and kinetics of particles, work and energy, impulse and momentum, collisions, two- and three-dimensional motions. Letter grading.

103. Applied Numerical Computing and Modeling in Civil and Environmental Engineering. (4) Lecture, four hours; outside study, six hours. Requisite: course M20 (or Computer Science 31), Mathematics 33B or Mechanical and Aerospace Engineering 62 (either may be taken concurrently). Introduction to computer applications with specific applications in civil and environmental engineering. Topics include error and computer arithmetic, rounding, curve fitting, numerical integration and differentiation, solution of systems of linear and nonlinear equations, numerical solution of ordinary and partial differential equations. Letter grading.


108L. Experimental Structural Mechanics. (4) (Formerly numbered 130L) Lecture, two hours; laboratory, six hours; outside study, four hours. Requisite or corequisite: course 108. Lectures and laboratory experiments on mechanical testing of metals (steel, aluminum, brass), high-strength plastics, and concrete (cylinders, beams). Direct tension. Direct compression. Ultrasonic nondestructive evaluation. Elastomer columns. Fatigue mechanical testing and fracture toughness. Splitting tension and flexural tension. Elastic, plastic, and fracture behavior. ASTM and RILEM. Cyclic loading. Microstructures and effects. Letter grading.

110. Introduction to Probability and Statistics for Engineers. (4) Lecture, four hours; discussion, one hour (when scheduled); outside study, seven hours. Requisite: Mathematics 32A, 33A. Recommended: course M20. Introduction to fundamental concepts and applications of probability and statistics in civil engineering, with focus on how these concepts are used in experimental design and sampling, data analysis, risk and reliability analysis, and project design under uncertainty. Topics include basic probability concepts: random variables, probability, probability distributions, functions of random variables, estimating parameters from observational data, regression, hypothesis testing, and Bayesian concepts. Letter grading.

120. Principles of Soil Mechanics. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 108. Soil as foundation for structures. Soil formation. Soil classification, physical and mechanical properties, soil compaction, earth pressures, consolidation, and shear strength. Letter grading.

121. Design of Foundations and Earth Structures. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 120. Design methods for foundations and earth structures. Site investigation, including evaluation of soil properties for design. Design of footings and piles, including stability and settlement calculations. Design of slopes and earth retaining structures. Letter grading.

123. Advanced Geotechnical Design. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 121. Discussion of aspects of cement and concrete materials. Concurrently scheduled with course C204. Letter grading.


128L. Soil Mechanics Laboratory. (4) Lecture, one hour; laboratory, six hours; outside study, five hours. Requisite or corequisite: course 125. Laboratory experiments on basic soil mechanics problems; emphasis on preparation of professional engineering documents such as proposals, work acknowledge- ment, figures, plans, and reports. Letter grading.

129L. Experimental Structural Dynamics. (4) Lecture, four hours; discussion, one hour; laboratory, six hours; outside study, five hours. Requisite or corequisite: course 135B. Basic structural dynamics course for civil engineering students. Elastic free and forced vibrations of single degree of freedom systems, introduction to response history and response spectrum analysis approaches for single and multidegree-of-freedom systems. Virtual, bending, and torsional vibration of beams. Concurrently scheduled with course C239. Letter grading.

137L. Structural Dynamics Laboratory. (4) Lecture, two hours; laboratory, five hours; outside study, five hours. Requisite: courses M20, 135A. Limited enrollment. Computer-aided optimum design, computer-aided optimum design of nonstructural elements of a building model structure. Use of computer-based data acquisition and interpretation systems for comparison of experimental and theoretically predicted behavior. Letter grading.

137L. Structural Dynamics Laboratory. (4) Lecture, two hours; laboratory, five hours; outside study, five hours. Requisite: courses M20, 135A. Limited enrollment. Computer-aided optimum design, computer-aided optimum design of nonstructural elements of a building model structure. Use of computer-based data acquisition and interpretation systems for comparison of experimental and theoretically predicted behavior. Letter grading.

140L. Structural Components and Systems Testing Laboratory. (4) Lecture, two hours; laboratory, six hours; outside study, six hours. Requisite: course 135A. Computer-assisted testing of structural elements (beams, columns) and systems (slab-column, beam-column) and dynamic tests of simple building systems. Quasi-static tests focus on assessment of element or subsystem stiffness, strength, and deformation capacity, whereas dynamic tests focus on assessment of periods, modes shape, and damping factors from forced vibrations. Dynamic simulation. Letter grading.

141. Steel Structures. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 135A, 135B, beams, columns, and slabs in reinforced concrete structures.

142L. Reinforced Concrete Structural Laboratory. (4) Lecture, four hours; laboratory, six hours: outside study, four hours. Requisites: courses 135B, 142. Limited enrollment. Design considerations used for reinforced concrete beams, columns, slabs, and joints evaluated through computer experiments and links between theory, building codes, and experimental results. Students demonstrate accuracies and limitations of reinforced concrete design. Development of skills for written and oral presentations. Letter grading.

143. Design of Prestressed Concrete Structures. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 135A, 142. Equivalent loads and allowable flexural stresses in determine and indeterminate systems. Flexural and shear strength design, including secondary effects in indeterminate systems. Design of indeterminate post-tensioned beam using both hand calculations and commercially available computer program. Discussion of external post-tensioning, one- and two-way slabs and flat plates. Letter grading.


150. Introduction to Hydrology. (4) Lecture, four hours; outside study, six hours. Enforced requisites: course M20 (or Computer Science 31), Mechanical and Aerospace Engineering 103. Study of hydrologic cycle and relevant atmo- sphere, ocean, and energy balance, evaporation, precipi- tation formation, infiltration, evaporation, vegetation transpiration, groundwater flow, storm runoff, and flood processes. Letter grading.

151. Introduction to Water Resources Engineering. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisites: course 150, Mechanical and Aerospace Engineering 103. Recommended: courses 103, 110. Principles of hydraulics, flow of water in open channels and pressure conduits, reservoirs and dams, hydraulic machinery, hydroelec- tric power. Introduction to system analysis and design applied to water resources engineering. Letter grading.

152. Hydraulic and Hydrologic Design. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisites: courses 150, 151. Analysis and design of hydrologic systems, including stormwater management systems, potable and recycled water distribution systems, wastewater collection systems, and constructed wetlands. Emphas- is on bracing/anchoring design and application of reading/interpreting professional drawings and docu- ments, environmental impact reports, permitting, agency coordination, and engineering ethics. Project- based course. Project assignments are supplemented by use of engineering software and preparation of written engineering reports. Letter grading.


154. Chemical Fate and Transport in Aquatic Envi- ronments. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Recommended requisite: course 153. Fundamental physical, chemical, and biological principles governing movement and fate of contaminants in surface waters and groundwater. Topics include physical transport in various aquatic environments, air-water exchange, acid-base equilib- ria, reaction-kinetics, chemical speciation, complex- ation, biodegradation, and bioaccumulation. Practical quantitative problems solved considering both reac- tion and transport of chemicals in environment. Letter grading.

155. Unit Operations and Processes for Water and Wastewater Treatment. (4) Lecture, four hours; discus- sion, two hours; outside study, six hours. Requi- site: course 153. Biological, chemical, and physical methods used to modify water quality. Fundamentals of phenomena governing design of engineered systems for water and wastewater treatment systems. Field trip. Letter grading.

156A. Environmental Chemistry Laboratory. (4) Lecture, four hours; outside study, four hours. Requi- site: course 153 (may be taken concurrently). Chemistry 20A, 20B. Basic labo- ratory techniques in analytical chemistry related to water and wastewater analysis. Selected experiments include gravimetric analysis, titrimetry spectropho- tometry, redox systems, pH and electrical conduc- tivity. Concepts to be applied to analysis of real water samples in course 156B. Letter grading.

156B. Environmental Engineering Unit Operations and Processes Laboratory. (4) Lecture, two hours; laboratory, six hours; outside study, four hours. Requi- sites: Chemistry 20A, 20B. Characterization and analysis of typical natural waters and wastewaters for inorganic and organic constituents. Selected experi- ments include analysis of solids, nitrogen species, ox- ygen demand, and chlorine residual, that are used in unit operation experiments that include reactor dyna- mics, aeration, gas stripping, coagulation/floccula- tion, and membrane separation. Letter grading.

157A. Hydrologic Modeling. (4) Lecture, four hours; discussion, two hours; outside study, six hours. En- forced requisite: course 150 or 151. Introduction to hydrologic modeling. Topics selected from areas of (1) open-channel flow, including one-dimensional steady flow, uniform flow, and stage-discharge relation and water distribution systems, (3) rainfall-runoff modeling, and (4) groundwater flow and contaminant transport mod- eling, with focus on use of industry and/or research standard models with locally relevant applications. Letter grading.

157B. Design of Water Treatment Plants. (4) Lec- ture, four hours; discussion, two hours; outside study, six hours. Requisite: course 155. Water quality stand- ards and regulations, overview of water treatment plants, design of unit operations, predesign of water treatment plants, hydraulics of plants, process con- trol, and cost estimation. Letter grading.

157C. Design of Wastewater Treatment Plants. (4) Lecture, four hours; outside study, eight hours. Requi- site: course 155. Process design of wastewater treat- ment plants, including primary and secondary treat- ment, detailed design review of existing plants, pro- cess control, and economics. Letter grading.

157L. Hydrologic Analysis. (4) Lecture, two hours; laboratory, five hours; outside study, five hours. Requi- site: course 150. Collection, compilation, and inter- pretation of data from components of hydrologic cycle, including precipitation, evaporation, infiltration, and runoff. Use of hydrologic variables and parameters for development, construction, and appli- cation of analytical models for selected problems in hydrology and water resources. Letter grading.


M165. Environmental Nanotechnology: Implica- tions for Environmental Protection. (4) (Same as Engineering M103.) Lecture, four hours; discussion, two hours; outside study, six hours. Recommended requisite: Environmental Engineering 103. Introduction to potential impli- cations of nanotechnology to environmental systems as well as potential application of nanotechnology to en- vironmental protection. Technical contents include three multidisciplinary areas: (1) physical, chemical, and biological properties of nanomaterials, (2) transport, reactivity, and toxicity of nanoscale materials in natural environmental systems, and (3) use of nano- technology for energy and water production, plus envi- ronmental protection, monitoring, and remediation. Letter grading.

M166. Environmental Microbiology. (4) (Same as Environmental Health Sciences M166.) Lecture, four hours; discussion, two hours; outside study, six hours. Recommended requisite: course 153. Micro- bial cell and its metabolic capabilities, microbial ge- netics and its potentials, growth of microbes and ki- netics of growth, microorganisms, microbiology, mi- crobiology of wastewater treatment, probing of microbes, public health microbiology, pathogen con- trol. Letter grading.

M166L. Environmental Microbiology and Biotech- nology Laboratory. (1) (Same as Environmental Health Sciences M166L) Laboratory, two hours; out- side study, two hours. Corequisite: course M166. General laboratory practice within environmental mi- crobiology, sampling of environmental samples, clas- sical and modern molecular techniques for enumer- ation of microbes from environmental samples, tech- niques for determination of microbial activity in environmental samples, laboratory setups for studying environmental biotechnology. Letter grading.

180. Introduction to Transportation Engineering. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Designed for juniors/senior Civil En- gineering students and Public Affairs graduate stu- dents. General characteristics of transportation sys- tems, including streets and highways, rail, transit, air, and water. Capacity planning, design and operation of roadway systems, including horizontal and vertical alignment, cross sections, and pavements. Letter grading.

181. Traffic Engineering Systems: Operations and Control. (4) Lecture, four hours; fieldwork/laboratory, two hours; outside study, six hours. Designed for ju- niors/seniors. Applications of traffic flow theories; data collection and analyses; intersection capacity analy- ses; simulation models; traffic signal design; signal timing design, implementation, and perfor- mance evaluation; Intelligent Transportation Systems concepts, architecture, development. Letter grading.

C182. Rigid and Flexible Pavements: Design, Ma- terials, and Serviceability. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Rec- ommended requisites: courses C104, 108, 120, Mate- rials Science 104. Correlation, analysis, and metrical- ation of aspects of pavement design, including materi- als selection and traffic loading and volume. Special attention to aspects of pavement distress/service- life and factoring of environmental variables that influ- ence pavement performance and highlight their relevance in pavement design. Concurrently scheduled with course C282. Letter grading.
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188. Special Courses in Civil and Environmental Engineering. (2 to 6) Lecture, to be arranged; outside study, to be arranged. Special topics in civil engineering for undergraduate students taught on experimental or temporary basis, such as those taught by resident or visiting faculty members. May be repeated once for credit with topic or instructor change. Letter grading.

194. Research Group Seminars: Civil and Environmental Engineering. (2 to 6) Seminar, to be arranged; outside study, two to eight hours; outside study, four to 10 hours. Designated for undergraduate students who are part of research group. Discussion of research methods and current literature in the field of faculty members. May be repeated for credit. Letter grading.

199. Directed Research in Civil and Environmental Engineering. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit with school approval. Individual contract required; enrollment petitions available in Office of Academic and Student Affairs. Letter grading.

Graduate Courses

200. Civil and Environmental Engineering Graduate Seminar. (2) (Formerly numbered 249 and 259A.) Seminar, four hours; outside study, two hours. Various topics in civil engineering. Required for graduate students in civil engineering programs that may include earthquake engineering, environmental engineering, geotechnical engineering, hydrology and water resources engineering, materials engineering, structural engineering, and structural mechanics. May be repeated for credit. S/U grading.

C204. Structure, Processing, and Properties of Civil Engineering Materials. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Discussion of aspects of cement and concrete materials, including manufacture of cement and production of concrete. Aspects of cement composition and basic chemical composition of concrete, properties of plastic and hardened concrete, chemical admixtures, and quality control and acceptance testing. Development and testing of fundamentals for complete understanding of overall response of all civil engineering materials. By end of term, successful utilization of fundamental materials science concepts to understand, explain, analyze, and describe engineering performance of civil engineering materials. Concurrently scheduled with course C104. Letter grading.


221. Advanced Foundation Engineering. (4) Lecture, four hours; outside study, eight hours. Requirements: courses 121, 220. Stress distribution, bearing capacity and settlement of shallow foundations, including spread footings and mats. Performance of driven pile and drilled shaft foundation systems. Performance analysis of geologic processes to predict their potential effect on land use, development, public health, and public safety. Letter grading.

M230A. Linear Elasticity. (4) (Same as Mechanical and Aerospace Engineering M230A.) Lecture, four hours; outside study, eight hours. Requisite: course 120. Advanced applications of mechanics of deformable solids, deformation, and fluid flow in fields of civil engineering and geotechnical engineering. Letter grading.

M230B. Nonlinear Elasticity. (4) (Same as Mechanical and Aerospace Engineering M230B.) Lecture, four hours; outside study, eight hours. Requisite: course M230A. Kinematics of deformation, material and spatial coordinates, deformation gradient tensor, nonlinear and linear strain tensors, strain displacement relations; balance laws, Cauchy and Piola stresses, Cauchy equations of motion, balance of energy, constitutive relations, elasticity, hyperelasticity, thermoelasticity, linearization of field equations; solution of selected problems. Letter grading.


234. The Theory of Plates and Shells. (4) Lecture, four hours; outside study, eight hours. Requisite: course 130. Small and large deformation theories of thin plates; energy methods; free vibrations; membrane theory of cylindrical shells; axisymmetric deformations of cylindrical and spherical shells, including bending. Letter grading.

235A. Advanced Structural Analysis. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: courses 130, 135A. Advanced structural analysis of reinforced concrete members; structural systems with one-dimensional elements; in- truction to variational calculus; discrete element displacement, force, and mixed methods for membranes, plates, shell structures; instability effects. Letter grading.

235B. Finite Element Analysis of Structures. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: courses 130, 235A. Direct energy formulations for deformable systems; solid element methods for linear equations; analysis of structural systems with one-dimensional elements; introduction to variational calculus; discrete element displacement, force, and mixed methods for membranes, plates, shell structures; instability effects. Letter grading.

235C. Nonlinear Structural Analysis. (4) Lecture, four hours; outside study, eight hours. Requisite: course 235B. Classification of nonlinear effects; material nonlinearities; constitutive material behavior; geometric nonlinearities, Lagrangian, Eulerian description of motion; finite element methods in geometrically nonlinear problems; postbuckling behavior of structures; solution of non-linear equations; incremental, iterative, programming methods. Letter grading.

236. Stability of Structures I. (4) Lecture, four hours; outside study, eight hours. Requisite: course 130 or 136B. Elastic buckling of bars, different approaches...


243A. Behavior and Design of Reinforced Concrete Structural Elements. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 142. Advanced topics on design of reinforced concrete structures including stress analysis, behavior, and design of shear. Letter grading.

243B. Response and Design of Reinforced Concrete Structural Systems. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course C137 or 243A. Information on response and behavior of reinforced concrete buildings in earthquake ground motions. Topics include use of elastic and inelastic response spectra, role of strength, stiffness, and ductility in design, use of prescriptive versus performance-based design methodologies, and application of elastic and inelastic analysis techniques for new and existing construction. Letter grading.

244. Structural Reliability. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Introduction to concepts of structural reliability. Topics include computing first- and second-order estimates of failure probabilities of engineered systems, computing sensitivities of failure probabilities to changes in input values, measuring the relative importance of random variables associated with systems, identifying relative advantages and disadvantages of various analytical reliability methods, using reliability tools to computer-simulated building codes, and performing reliability calculations related to performance-based engineering. Letter grading.

245. Earthquake Ground Motion Characterization. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course C251A. Earthquake fundamentals, including plate tectonics, fault types, seismic waves, and magnitude scales. Characterization of earthquake source, including magnitude range and rate of future earthquakes. Ground motion prediction equations and site effects on ground motion. Seismic hazard analysis. Ground motion selection and application for response history analysis. Letter grading.

246. Structural Response to Ground Motions. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses C137, 141, 235B, 239A, 239B. Response of structures to ground motions due to earthquakes. Computational methods. Response spectra. Techniques for recording and analyzing, including evaluation of contemporary design standards. Limitations due to idealizations. Letter grading.

247. Earthquake Hazard Mitigation. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 130, and M237A or 246. Concept of seismic isolation, linear theory of base isolation, visco-elastic and hysteretic behavior, elastomeric bearings under compression and bending, buckling of bearings, sliding bearings, passive energy dissipation devices, response of structures with isolation and passive energy dissipation devices, static and dynamic analysis of ground motions, response spectra, and Fourier spectra. Response of structures to ground motions due to earthquakes. Computational methods. Letter grading. Requisites: analysis, including evaluation of contemporary design standards. Limitations due to idealizations. Letter grading.


250C. Hydrometeorology. (4) Lecture, four hours; outside study, eight hours. Requisite: course 250A. In-depth study of hydrometeorological processes. Role of hydrology in climate system, precipitation and evaporation processes, atmospheric radiation, exchange of mass, heat, and momentum between soil and vegetation surface and overlying atmosphere, flux and transport in turbulent boundary layer, basic remote sensing principles. Letter grading.

250D. Water Resources Systems Engineering. (4) Lecture, four hours; outside study, eight hours. Requisite: course 250A. Application of mathematical programming techniques to water resources systems. Topics include reservoir management and operation, optimal timing, sequencing and sizing of water resources projects; and multiobjective planning and conjunctive use of surface water and groundwater. Emphasis on management of water quantity. Letter grading.


251B. Contaminant Transport in Groundwater. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 251A, 251C. Hydrogeological and mechanistic models of groundwater transport, governing equations of mass transport in porous media, various analytical and numerical solutions, determination of dispersion parameters by laboratory and field experiments, biological and reactive transport in multiphase flow, remediation design, software packages and applications. Letter grading.

251C. Remote Sensing with Hydrologic Applications. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 250A, 250C. Introduction to basic physical concepts of remote sensing as they relate to surface and atmospheric hydrologic processes. Applications include radiative transfer modeling and retrieval of hydrologically relevant parameters such as topography, soil moisture, snow properties, vegetation, and precipitation. Letter grading.

251D. Hydrologic Data Assimilation. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 250A, 250C. Introduction to basic concepts of classical and Bayesian estimation theory for purposes of hydrologic data assimilation. Applications geared toward assimilating disparate observations into dynamic models of hydrologic systems. Letter grading.


254A. Environmental Aquatic Inorganic Chemistry. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: Chemistry 20B, Mathematics 31A, 31B, Physics 1A, 1B. Equilibrium and kinetic descriptions of chemical behavior of metals and inorganic ions in natural fresh/marine surface waters and in water treatment. Processes include acid-base chemistry and alkalinity (carbonate system), complexation, precipitation/dissolution, adsorption, oxidation/reduction, and phototchemistry. Letter grading.

255A. Physical and Chemical Processes for Water and Wastewater Treatment. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 155, 254A, 255A. Introduction to water and wastewater treatment processes. Applications to activated sludge, gas transfer, fixed-film processes, aerobic and anaerobic biodegradation, and membrane processes. Letter grading.

255B. Biological Processes for Water and Wastewater Treatment. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 254A, 255A. Fundamentals of environmental engineering microbiology: kinetics of microbial growth and biological oxidation; applications for activated sludge, gas transfer, fixed-film processes, aerobic and anaerobic biodegradation, and membrane processes. Letter grading.

255A. Membrane Separations in Aquatic Systems. (4) Lecture, four hours; outside study, eight hours. Requisite: course 254A. Applications of membrane separation technologies to desalination, water reclamation, brine disposal, and ultrapure water systems. Discussion of reverse osmosis, ultrafiltration, electro dialysis, and ion exchange technologies from both practical and theoretical standpoints. Letter grading.

260. Advanced Topics in Hydrology and Water Resources. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 250A, 250B, 250D. Current research topics in inverse problem of parameter estimation. Experimental and field measurement of remote sensitive use of surface and groundwater, multiobjective water re-
sources planning, and optimization of water resource systems. Topics may vary from term to term. Letter grading.


261B. Advanced Biological Processes for Water and Wastewater Treatment. (4) Lecture, four hours; outside study, eight hours. Requisite: course 256A. In-depth treatment of selected topics related to biological treatment of waters and wastewaters, such as biodegradation of xenobiotics, pharmaceuticals, emerging pollutants, toxicity, and nutrients. Discussion of theoretical aspects, experimental observations, and recent literature. Application to important and emerging environmental problems. Letter grading.

M262A. Introduction to Atmospheric Chemistry. (4) (Same as Atmospheric and Oceanic Sciences M203A.) Lecture, three hours. Requisite for undergraduates: Chemistry 20B. Principles of chemical kinetics, thermodynamics, physical chemistry; chemical composition and history of Earth's atmosphere; biogeochemical cycles of key atmospheric constituents; basic photochemistry of tropospheric chemistry; photochemistry; Tutorial, to be arranged; atmospheric chemical processes; air pollution; chemistry and climate. S/U or letter grading.

M262B. Atmospheric Diffusion and Air Pollution. (4) (Same as Atmospheric and Oceanic Sciences M224B.) Lecture, three hours. Nature and sources of atmospheric pollution; diffusion from point, line, and area sources; pollution dispersion in urban complexes; meteorological factors and air pollution potential; meteorological aspects of air pollution. S/U or letter grading.

263A. Physics of Environmental Transport. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students. Transport processes in surface water, groundwater, and atmosphere. Emphasis on exchanges across phase boundaries: sediment/water interface; air/water gas exchange; particles, droplets, and bubbles; small-scale dispersion and mixing; effect of reactions on transport; linkages between physical, chemical, and biological processes. Letter grading.

263B. Advanced Topics in Transport at Environmental Interfaces. (4) Lecture, four hours; outside study, eight hours. Requisite: course 263A. In-depth treatment of selected topics involving transport phenomena at environmental interfaces between solid, fluid, and gas phases, such as aquatic sediments, porous aggregates, and vegetative canopies. Discussion of theoretical models and experimental observations. Application to important environmental engineering problems. Letter grading.

266. Environmental Biotechnology. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 153, 254A. Environmental biotechnology—concept and potential; biotechnology of pollution control, bioremediation, biomass conversion: composting, biogas and bioethanol production. Letter grading.

267. Environmental Applications of Geochemical Modeling. (4) Lecture, four hours; outside study, eight hours. Requisite: course 254A. Geochemical modeling is important tool for predicting environmental impacts of contamination. Hands-on experience in modeling using geochemical software packages common in environmental consulting industry to gain better understanding of governing geochemical principles pertaining to movement and transformation of contaminants. Types of modeling include speciation, mineral solubility, surface complexation, reaction path, inverse mass balance, and reactive transport modeling. Case studies involve acid mine drainage, nuclear waste disposal, bioavailability and risk assessment, mine tailings and mining waste, deep well injection, landfill leachate, and microbial respiration. Research/modeling project required. Letter grading.

C282. Rigid and Flexible Pavements: Design, Materials, and Serviceability. (4) Lecture, four hours; discussions, two hours; outside study, six hours. Correlation, analysis, and metrization of aspects of pavement design, including materials selection and traffic loading and volume. Special attention to aspects of pavement distress/serviceability and factoring of these into metrics of pavement performance. Discussion of potential choices of pavement materials (i.e., asphalt and concrete) and their specific strengths and weaknesses in paving applications. Utilization and correlation of different variables that influence pavement performance and highlight their relevance in pavement design. Concurrently scheduled with course C182. Letter grading.

296. Advanced Topics in Civil Engineering. (2 to 4) Seminar, to be arranged. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

296. Seminar: Engineering. (2 to 4) Seminar, to be arranged. Limited to graduate civil engineering students. Seminars may be arranged in advanced technical fields. If appropriate, field trips may be arranged. May be repeated with topic change. Letter grading.

575. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Teaching Assistant Training Seminar. (2) Seminar, two hours; Preparation: appointment as teaching assistant in Civil and Environmental Engineering Department. Seminar on communication of civil engineering principles, concepts, and methods; teaching assistant preparation, organization, and presentation of material, including use of visual aids; grading, advising, and rapport with students. S/U grading.

596. Directed Individual or Tutorial Studies. (2 to 8) Tutorial, to be arranged. Limited to graduate civil engineering students. Petition forms to request enrollment. Free choice of material, including use of visual aids; grading, advising, and supervision of potential choices of pavement materials (i.e., asphalt and concrete) and their specific strengths and weaknesses in paving applications. Utilization and correlation of different variables that influence pavement performance and highlight their relevance in pavement design. Concurrently scheduled with course C182. Letter grading.


597C. Preparation for PhD Oral Qualifying Examination. (2 to 12) Tutorial, to be arranged. Limited to graduate civil engineering students. Preparation for oral qualifying examination, including preliminary research on dissertation. S/U grading.

598. Research and Preparation of MS Thesis. (2 to 12) Tutorial, to be arranged. Limited to graduate civil engineering students. Supervised independent research for MS candidates, including thesis proposal. S/U grading.

599. Research and Preparation of PhD Dissertation. (2 to 12) Tutorial, to be arranged. Limited to graduate civil engineering students. Usually taken after students have been advanced to candidacy. S/U grading.

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College of Letters and Science
100 Dodd Hall
Box 351417
Los Angeles, CA 90095-1417
310-825-4171
http://www.classics.ucla.edu

Kathryn A. Morgan, PhD, Chair

Professors
David L. Blank, PhD
Kathryn A. Morgan, PhD
Sarah P. Morris, PhD (Steinmetz Professor of Classical Archaeology and Material Culture)
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Steven Lattimore, PhD
Philip Levine, PhD
Jaan Puhvel, PhD

Associate Professors
Robert A. Gurnal, PhD
Chris J. Johanson, PhD
Alex C. Purves, PhD

Assistant Professors
Bryan Kirkland, PhD
Francesca K. Martelli, DPhil
Lidia Spielberg, PhD

Adjunct Associate Professor
Catherine Atherton, PhD

Scope and Objectives
The civilizations of ancient Greece and Rome are the focus of research and teaching in the Department of Classics. These areas of study are important in their own right and for their contributions to the political, cultural, intellectual, and artistic development of the Western world. To this end, the department offers a wide variety of interdisciplinary courses in classical civilization (multiple-listed in the Art History, Philosophy, and Political Science Departments), as well as elementary and advanced courses in ancient Greek and Latin language, literature, and linguistics. Classical civilization courses include such topics as Greek and Latin literature in translation (genres of epic, comedy, tragedy, biography), classical mythology, religion, law, gender and sexuality, politics, philosophy, art and archaeology, and the reception of the ancient world in modern cultures (cinema and classics).

The department offers Bachelor of Arts degrees in Classical Civilization, in Greek, in Latin, and in Greek and Latin and the PhD degree in Classics. Students can earn Master of Arts degrees in Classics (Greek and Latin), in Greek, or in Latin only after they have been admitted to the PhD program.

Undergraduate Study
Students considering a major in the department should consult with the adviser as soon as possible regarding the planning of their course of study.
as possible in their University career, but in no case later than the point at which they are about to take upper-division courses.

The majors offered in the Classics Department are designated capstone majors. Undergraduate students take a capstone seminar in which they use the skills and expertise acquired in earlier coursework to research, analyze, and complete a written paper or project. They identify and analyze ancient classical documents, material evidence, or other forms of primary sources and demonstrate their critical skills by engaging in presentations and weekly discourse with their peers.

**Classical Civilization BA**

**Capstone Major**

The civilizations of ancient Greece and Rome have made important contributions to the political, social, artistic, and intellectual development of the Western world. The purpose of the Classical Civilization major is to provide students with a formal and balanced introduction to the historical and cultural experiences of the ancient Greeks and Romans. The program of study is structured, yet not rigid. Lower-division survey courses and requirements in elementary language study, ancient history, and classical art establish an essential background of knowledge, while electives encourage individual and specialized interests. The program offers a broad range of courses in the fields of language, literature, history, mythology, religion, philosophy, art, and archaeology. The major serves as excellent and rewarding preparation for a professional career in medicine, law, business, journalism, communications, or the arts.

**Preparation for the Major**

**Required:** Classics 10, 20, Greek 3 or 16 or Latin 3 or 16, and two courses from 30, 40W, 41W, 42, 51A, 51B, 60, 88GE.

**Transfer Students**

Transfer applicants to the Classical Civilization major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one year of Greek and of Latin and related courses in civilization, culture, history, linguistics, literature, and closely related languages.

Refer to the [UCLA Transfer Admission Guide](#) for up-to-date information regarding transfer selection for admission.

**The Major**

**Required:** (1) Seven upper-division Greek courses, including course 110; Greek 197 and 199 may be applied only by petition; (2) three upper-division courses in classical civilization and/or ancient history (History 112A through M112E, 113A, 113B, 114A, 114B, 114C, 115). Courses in related fields not offered by the department may be substituted by petition and with approval of the faculty undergraduate advisor; (3) one capstone seminar (Classics 191).

**Greek and Latin BA**

**Capstone Major**

**Preparation for the Major**

**Required:** Classics 10, 20; Greek 1, 2, 3, 20 and Latin 1, 2, 3, 20, or equivalent. Greek 16 may be substituted for Greek 1, 2, 3.

**Transfer Students**

Transfer applicants to the Greek and Latin major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one year of Greek and of Latin and related courses in civilization, culture, history, linguistics, literature, and closely related languages.

Refer to the [UCLA Transfer Admission Guide](#) for up-to-date information regarding transfer selection for admission.

**The Major**

**Required:** (1) Eight upper-division Greek and/or Latin courses (of which at least four must be in each language), including Greek 110 or Latin 110; Greek and/or Latin 197 and 199 may be applied only by petition; (2) three upper-division courses in classical civilization and/or ancient history (History 112A through M112E, 113A, 113B, 114A, 114B, 114C, 115). Courses in related fields not offered by the department may be substituted by petition and with approval of the faculty undergraduate advisor; (3) one capstone seminar (Classics 191).

**Greek BA**

**Capstone Major**

**Preparation for the Major**

**Required:** Classics 10, 20; Greek 1, 2, 3, 20, or equivalent. Greek 16 may be substituted for Greek 1, 2, 3.

**Transfer Students**

Transfer applicants to the Greek major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one year of Greek and related courses in civilization, culture, history, linguistics, literature, and closely related languages.

Refer to the [UCLA Transfer Admission Guide](#) for up-to-date information regarding transfer selection for admission.

**The Major**

**Required:** (1) Seven upper-division Greek courses, including course 110; Greek 197 and 199 may be applied only by petition; (2) three upper-division courses in classical civilization and/or ancient history (History 112A through M112E, 113A, 113B, 114A, 114B, 114C, 115). Courses in related fields not offered by the department may be substituted by petition and with approval of the faculty undergraduate advisor; (3) one capstone seminar (Classics 191).

**Latin BA**

**Capstone Major**

**Preparation for the Major**

**Required:** Classics 10, 20; Latin 1, 2, 3, 20, or equivalent. Latin 16 may be substituted for Latin 1, 2, 3.

**Transfer Students**

Transfer applicants to the Latin major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one year of Latin and related courses in civilization, culture, history, linguistics, literature, and closely related languages.

Refer to the [UCLA Transfer Admission Guide](#) for up-to-date information regarding transfer selection for admission.

**The Major**

**Required:** (1) Seven upper-division Latin courses, including course 110; Latin 197 and 199 may be applied only by petition; (2) three upper-division courses in classical civilization and/or ancient history (History 112A through M112E, 113A, 113B, 114A, 114B, 114C, 115). Courses in related fields not offered by the department may be substituted by petition and with approval of the faculty undergraduate advisor; (3) one capstone seminar (Classics 191).

Note: Students in the Greek, Latin, and Greek and Latin majors are permitted to take Greek 200A, 200B, 200C and Latin 200A, 200B, 200C with consent of the instructor.

**Honors Program**

**Admission**

The honors program is open to all departmental majors with a cumulative grade-point average of 3.5 or better in departmental courses and an overall GPA of 3.25 or better. Students with lower GPAs may petition for admission to the program, but these grade-point averages must be achieved before graduation in order to qualify for honors.

**Requirements**

All honors students are required to take Classics 191 (or an equivalent undergraduate seminar) in their junior year before beginning work on the honors thesis. Students must then enroll in Classics 198A and 198B in consecutive terms, in which they write the thesis under the direct supervision of a faculty member. They may take courses 198A and 198B concurrently or be exempt from course 198A only with approval of the faculty undergraduate advisor. In course 198A students submit an annotated bibliography and preliminary outline of their thesis. In course 198B, they submit at least one initial draft and the final revised version of the thesis. Only course 198B may be applied toward the upper-division classical civilization requirement for departmental majors.

To qualify for graduation with departmental honors, students must (1) have a cumulative grade-point average of 3.5 or better in departmental courses and an overall GPA of 3.25 or
better and (2) complete Classics 18A and 19B with grades of A– or better.

To qualify for graduation with departmental highest honors, students must (1) have a cumulative GPA of 3.85 or better in departmental courses and an overall GPA of 3.65 or better and (2) complete Classics 18A and 19B with grades of A.

Classical Civilization Minor

The Classical Civilization minor is designed to recognize a serious commitment to the study of the cultures and civilizations of ancient Greece and Rome. Lower-division survey courses in historical studies, classical literature, mythology, and film provide an essential introduction to the imagination and power of the ancient world. Students may fulfill upper-division requirements from a variety of courses in classical civilization and related fields, including political and social history, literature, art and archaeology, religion, mythology, philosophy, and cultural studies of ethnicity, gender, and sexuality in antiquity.

To enter the minor, students must have an overall grade-point average of 2.0 or better. Required Lower-Division Courses (15 units): Classics 10, 20, and one course from 30, 40W, 41W, 42, 51A, 51B, 60.

Required Upper-Division Courses (20 units): Five upper-division courses in classical civilization offered by the department. One course in a related field may be substituted with approval of the faculty undergraduate adviser. Classics 191 may be applied, but all other courses in the 190 series may be substituted only by petition.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Required Lower-Division Courses (14 units): Classics 2, 3, 20, or equivalent. Latin 16 may be substituted for Latin 2 and 3.

Required Upper-Division Courses (20 units): Five courses selected from Latin 100 through 133.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Latin Minor

The Latin minor is designed to recognize a serious commitment to the study of the Latin language. After a year of elementary Latin (Latin 1, 2, 3) or its equivalent, students select departmental upper-division reading courses in classical (and/or late antique and medieval) Latin prose and poetry that provide close analysis of individual texts, with attention to their historical, literary, and cultural context. Subjects of study include Roman comedy, epic, lyric, elegy, satire, history, rhetoric, philosophy, epigraphy, and the novel.

To enter the minor, students must have an overall grade-point average of 2.0 or better. Required Lower-Division Courses (14 units): Latin 2, 3, 20, or equivalent. Latin 16 may be substituted for Latin 2 and 3.

Required Upper-Division Courses (20 units): Five courses selected from Latin 100 through 133.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Classics offers the Master of Arts (MA) degree in Greek, Master of Arts (MA) degree in Latin, and Master of Arts (MA), Candidate in Philosophy (CPHil), and Doctor of Philosophy (PhD) degrees in Classics. MA degrees can be earned only after students have been admitted to the PhD program.

Classics

Lower-Division Courses

10. Discovering Greeks. (5) Lecture; three hours; discussion, one hour. Knowledge of Latin not required. Study of Greek life and culture from age of Homer to Roman conquest. Readings focus on selections from works of ancient authors in translation. Lectures illustrated with images of art, architecture, and material culture. P/NP or letter grading.

20. Discovering Romans. (5) Lecture; three hours; discussion, one hour. Knowledge of Latin not required. Study of Roman life and culture from time of city's legendary foundations to end of classical antiquity. Readings focus on selections from works of ancient authors in translation. Lectures illustrated with images of art, architecture, and material culture. P/NP or letter grading.

40W. Reading Greek Literature: Writing-Intensive. (5) Lecture, two hours; discussion, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Exploration in detail and from variety of critical perspectives of carefully selected literary texts characteristic of ancient Greece and significant in Western literary tradition. Satisfies Writing II requirement. Letter grading.

41W. Reading Roman Literature: Writing-Intensive. (5) Lecture, two hours; discussion, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Exploration in detail and from variety of critical perspectives of carefully selected literary texts characteristic of ancient Rome and significant in Western literary tradition. Satisfies Writing II requirement. Letter grading.

42. Cinema and Ancient World. (5) Lecture/screenings, five hours; discussion, 75 minutes. Use of popular culture and cinema to introduce students to ancient Greek and/or Roman culture; focus at discretion of instructor. P/NP or letter grading.

51A. Art and Archaeology of Ancient Greece. (5) Lecture; three hours; discussion, one hour. Survey of major period, theme, or medium of Greek art and archaeology at discretion of instructor. P/NP or letter grading.

51B. Art and Archaeology of Ancient Rome. (5) Lecture; three hours; discussion, 75 minutes. Survey of major period, theme, or medium of Roman art and archaeology at discretion of instructor. P/NP or letter grading.

60. Fantastic Journey: Antiquity and Beyond. (5) Lecture; two and one half hours; discussion, one hour. Investigation of phenomenon of fantastic or imaginary journey, from Homer’s Odyssey to Stanley Kubrick’s 2001: A Space Odyssey. Examination of ways in which travel to strange or new worlds is presented through numerous texts (and occasionally films) across different cultures and periods, with focus primarily on antiquity but also looking at how important motifs from ancient Greek and Roman travel narratives have endured to present day. Issues include cultural relativism, what makes space either familiar or alien, rebuilding of home in fantastic territories, methods of travel (both fantastic and mundane), methods of measuring time and distance across space, modern classifications of fantasy and science fiction, and to what extent these terms are applicable to ancient world. P/NP or letter grading.

88A-88Z. Lower-Division Seminars. (4 each) Seminar, three hours. Variable topics; consult Schedule of Classes or department for topics to be offered in specific term. P/NP or letter grading.

895E. General Education Seminar Sequences. (5) Seminar, three hours. Focused study of one aspect of ancient Greek or Roman culture or reception of classical tradition. Topics are interdisciplinary in nature (literature, arts, religion, politics, culture) and make connections between ancient and postclassical eras. Topics include rediscovery of Pompeii and Herculanenum; Roman religion and literature; pleasures of Greek or Roman body; and 18th-century British literature and reception of classics. P/NP or letter grading.
Upper-Division Courses

M114A. History of Ancient Mediterranean World. (4) (Same as History M112C.) Lecture, five hours. In- tentive study of geography and culture of ancient Rome from founding of city to conversion of Christianity. Part of UCLA Summer Travel Program. P/NP or letter grading.

M114B. History and Monuments of Rome: Field Study. (4) (Same as History M112E.) Fieldwork, five hours. Enforced corequisite: course M114A. Examination of history, art, and monuments of ancient Rome through daily lectures and field visits to museums and archaeological sites. Field trips outside Rome to Pompeii, Hadrian’s Villa, and ancient Ostia. Reception and ruins of Roman antiquity in medieval, Renaissance, and modern eras explored in their historical context. Part of UCLA Summer Travel Program, P/NP or letter grading.

M121. Ancient and Medieval Political Theory. (4) (Same as Political Science M111A.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Explication and critical analysis of major thinkers such as Plato, Aristotle, Thucydides, St. Augustine, Aquinas, Machiavelli, and others in one or two major works. May be repeated for credit with topic change. P/NP or letter grading.

M124. Modern Receptions of Ancient Political Thought. (4) (Same as Political Science M119A.) Lecture, three hours. Conceived of as developing an interdisciplinary field for study of political thought which has a past, is being reinterpreted in the present, and influences the future.VRTA a comprehensive survey course of major works of ancient political thought, as seen through the eyes of modern thinkers, thinkers from different epochs and different disciplines.

M125. Invention of Democracy. (5) (Same as Political Science M112B.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of how Western culture has conceived and reinterpreted the political thought of ancient Greeks and Romans. Topics include examination of influential cases of modern reception of classical antiquity, P/NP or letter grading.

M147. Aristotle. (4) (Same as Philosophy M102.) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Study of selected topics in early and middle dialogues of Plato. P/NP or letter grading.

M148. Early Greek Medicine and Thought. (5) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Study of selected topics in middle and later dialogues of Plato. P/NP or letter grading.

M149. Bodies in Antiquity. (4) (Same as Disability Studies M122D.) Lecture, three hours. Investigation of individuals and groups that compose ancient Greek and Roman societies and relationship they have with larger society. Emphasis on marginal-ized or minority groups such as women, noncitizens (resident aliens and provincials), slaves, children, el- derly, and disabled. Examination of ways these groups contribute to our understand- ing of ancient society as whole. May be repeated for credit with topic change. P/NP or letter grading.

M150A. Female in Greek Literature and Culture. (4) Lecture, three hours. Preparation: course 10. Interdiscip- linary study of concept of female in Greek literature and culture. P/NP or letter grading.

M150B. Female in Roman Literature and Culture. (4) Lecture, three hours; discussion, one hour. Preparation: course 10 or 150A. Interdisciplinary study of concept of female in Roman literature and culture. P/NP or letter grading.

C151E. Archaeological Field Techniques. (12) Off-campus field and laboratory study of field archaeology, 36 hours. Preparation: at least one introductory course in archaeology. P/NP or letter grading.

M152A. Ancient City: Greek World. (4) Lecture, three hours. Preparation: course 10 or 51A or Art History 20 or History 1A. Range of interdisciplinary approaches to study of Athens and/or cities of Greek world, including Asia Minor, south Italy, and Sicily. Approaches, themes, and periods (both ancient city and reception of city from classical antiquity to modern era) vary depending on individual instructor and topic. May be repeated for credit with topic change. P/NP or letter grading.

M153B. Mucenian Art and Archaeology. (4) (Same as Art History M112A) Lecture, three hours. Preparation: course 10 or 51A or Art History 20. Study of development of art and architecture in Mycenaean Greece from circa 3000 to 1000 B.C. P/NP or letter grading.

M153C. Archaic Greek Art and Archaeology. (4) (Same as Art History M112C.) Lecture, three hours. Preparation: course 10 or 51A or Art History 20. Study of development of art and architecture of Greek world from approximately 800 through 490 B.C. P/NP or letter grading.

M153D. Classical Greek Art and Archaeology. (4) (Same as Art History M112D.) Lecture, three hours. Preparation: course 10 or 51A or Art History 20. Study of development of art and architecture of Greek world from middle of 4th century B.C., including transmittal of Greek art forms to Romans. P/NP or letter grading.

M153F. Etruscan Art. (4) (Same as Art History M112E.) Lecture, three hours. Preparation: course 10 or 51A or Art History 20. Study of development of art and architecture of Greek world from approximately 490 through 350 B.C. P/NP or letter grading.

M153E. Hellenistic Greek Art and Archaeology. (4) (Same as Art History M112F.) Lecture, three hours. Preparation: course 10 or 51A or Art History 20. Study of development of art and architecture of Greek world from 300 B.C. to A.D. 300. P/NP or letter grading.

M153H. Late Roman Art. (4) (Same as Art History M113C.) Lecture, three hours. Preparation: course 10 or 51A or Art History 20. Art of Roman Empire from 2nd through 4th century (A.D.) P/NP or letter grading.

M153I-M153J. Classical Archaeology. (4-5) (Same as Art History M114A-M114B-M114C.) Lecture, three hours. Preparation: one course from 10, 20, 51A, 51B, 100A, or 100B or 150A or Art History 20. May be repeated for credit. Letter grading.

M153K. Late Antique Art and Architecture. (4) (Same as Art History M114D.) Lecture, three hours. Preparation: one course from 10, 20, 51A, 51B, 100A, or 100B or 150A or Art History 20. May be repeated for credit with topic change. P/NP or letter grading.

M156. Legal Advocacy in Ancient World. (4) Lecture, three hours; discussion, one hour (when scheduled). Preparation: course 10 or 20. Study of theory and prac- tice of legal advocacy in classical Greece and Rome. May be repeated for credit with department consent. P/NP or letter grading.

M157I. Greco-Roman Sculpture; M153K. Greco-Roman Painting.

M155L. Late Antique Art and Architecture. (4) (Same as Art History M113A.) Lecture, three hours. Preparation: courses 10 or 51A or 51B, 100A, or 100B or 150A or Art History 20. May be repeated for credit with department consent. P/NP or letter grading.

M160. Legal Advocacy in Ancient World. (4) Lecture, three hours; discussion, one hour (when scheduled). Preparation: course 10 or 20. Study of theory and prac- tice of legal advocacy in classical Greece and Rome. May be repeated for credit with department consent. P/NP or letter grading.

M161. Women’s History in Ancient Mediterranean. (4) Lecture, three hours. Overview of approaches to problem of writing women’s history in ancient Medi- terranean world. Topics include law, medicine, work, religion, pagan, Christian, and Jewish culture, with particular attention to themes of war, slavery, and sex trafficking. Exercises train students in critical use of
primary documents and ancient sources, including inscriptions and other forms of material culture. P/NP or letter grading.

162. Classical Myth in Literature. (4) Lecture, three hours. Use of myth in principal authors and genres of Greek and Roman literature, with examples of its influence in later literatures. May be repeated once for credit with topic change. P/NP or letter grading.

163. Ovid and Consequences. (4) Lecture, three hours. Study of Ovid’s Metamorphoses and persistence and extent of Roman poet’s influence on subsequent literature, art, and film. Close analysis of Ovid’s seminal text before turning to poem’s classical, medieval, Renaissance, and modern imitators, from Apuleius to Shakespeare to Picasso and beyond. P/NP or letter grading.


165. Ancient Athletics. (4) Lecture, three hours. Requisite: course 10 or History 1A. Study of ancient Greek and Roman athletics and their connections with religion, politics, literature, and art. P/NP or letter grading.

166A. Greek Religion. (4) Lecture, three hours. Requisite: course 10 or Study of religion of ancient Greeks. P/NP or letter grading.


M167. Magic in Ancient World. (4) (Same as Ancient Near East B6) Lecture, three hours; discussion, one hour (when scheduled). Requisite: course 10 or 20. Exploration of art of influencing natural course of events by occult means as practiced in ancient world at large. Techniques of protection, prevention, and rectification of events by occult means as practiced in ancient world at large. Techniques of protection, prevention, and rectification of magical spells, literary texts about magic and cultures of ancient world. Source material includes types of magical spells, literary texts about magic and magicians, and artifacts such as amulets and ritual implements. P/NP or letter grading.

168. Comparative Mythology. (4) Lecture, three hours. Requisite: course 30, or Clusters 30A, 30B, and 30CW. Religious, mythical, and/or historical traditions of Greece and Rome compared with each other and with other traditions worldwide. P/NP or letter grading.

169. Sex in Ancient World. (4) Lecture, three hours. Requisite: course 10 or History 1A. Examination of sex and gender systems of Greek and Roman cultures in ancient Mediterranean world. What Greek and Roman society thought about sex, how they changed over time, and difference it makes. Readings include both modern theories about sex and history as foundation for course and broad range of ancient texts in translation. P/NP or letter grading.

M170C. Power and Imagination in Byzantium. (4) (Same as History M116C.) Lecture, three hours; discussion, one hour (when scheduled). Requisite: History 116A, 116B. Designed for juniors/seniors. How they changed over time, and difference it makes. Readings include both modern theories about sex and history as foundation for course and broad range of ancient texts in translation. P/NP or letter grading.

180. Introduction to Classical Linguistics. (4) Lecture, three hours. Requisite: Greek 3 or Latin 3. Linguistic approach to Greek and Latin, including Indo-European background, etymology, pronunciation, alphabets, sociolinguistics, and historical biblical linguistics, and applications to classical literature. P/NP or letter grading.


190. Research Colloquia in Classics. (1) Seminar, one hour. Limited to juniors/seniors. Designed to bring together students undertaking supervised tutorial research in seminar setting with one or more faculty members to discuss their own work or related work in discipline. Led by one supervising faculty member. May be repeated for credit. P/NP grading.

191. Capstone Seminar: Classics. (5) Seminar, three hours. Requisites: courses 10, 20, at least four upper-division major courses. Limited to declared junior/senior departmental majors; minors may be admitted with consent of instructor. Topical research seminar on important themes, periods, genres of ancient Greek and Roman literature. Intended to provide students with opportunity for serious engagement with research in discipline under close faculty supervision. Readings, discussions, oral presentations, and final research paper or project. May be repeated for credit. Letter grading.

193. Journal Club Seminars: Classics. (1) Seminar, one hour. Limited to undergraduate students. Group discussion of readings and topics selected from current issues in classics and related disciplines. May be repeated for credit. P/NP grading.

197. Individual Studies in Classics. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assignments, reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.


199. Directed Research in Classics. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses


201B. Topics in Ancient History: Roman World. (2 or 4) Seminar, three hours. Introduction to basic methods and approaches to study of Roman history by intensive examination of selected topics, including readings of ancient texts and modern scholarship. S/U or letter grading.

M218. Paleography of Latin and Vernacular Manuscripts, 900 to 1500. (4) Same as English M215, French M210, and History M218.) Lecture, three hours; discussion, two hours. Introduction to history of Latin and vernacular manuscript book from 900 to 1550. (1) train students to make informed judgments with regard to place and date of origin, (2) provide training in accurate reading and transcription of medieval scripts, and (3) examine manuscript book as witness to changing society that produced it. Focus on relationship between Latin manuscripts and vernacular manuscripts with regard to their respective presentation of written texts. S/U or letter grading.

220A. Interfaces: Transmission of Roman Literature, 100 to 500. (2 to 4) Seminar, three hours. Examination of transmission of Latin classical literature in late antiquity, Middle Ages, and Renaissance to understand processes by which Latin literature has been preserved. S/U (2-unit course) or letter (4-unit course) grading.

244. Textual Criticism: Studies in Preparation of Critical Edition of Greek and/or Latin Texts. (2 or 4) Seminar, three hours. Preparation of critical edition of ancient text: localization of manuscripts; collation; establishing stemma; selecting right reading on basis of knowledge of context, of language of author, and of sources; emendation formulation of apparatus criticus and apparatus fontium. S/U (2-unit course) or letter (4-unit course) grading.

245. Computing and Classics. (2 or 4) Seminar, three hours. Introduction to processing and analysis of digitized texts of classical authors for purposes of literary history and criticism. S/U (2-unit course) or letter (4-unit course) grading.

246. Greek and Latin Meter. (2 or 4) Seminar, three hours. Comprehensive study of meter as it functions in classical poetry. S/U (2-unit course) or letter (4-unit course) grading.

250. Topics in Greek and Roman Culture and Literature. (2 or 4) Seminar, three hours. Interdisciplinary study on topics of ancient Greek and Roman culture and/or literature. May be repeated for credit with topic change. S/U or letter grading.

251A. Seminar: Classical Archaeology—Aegean Bronze Age. (2 or 4) Seminar, three hours. S/U or letter grading.

251B. Seminar: Classical Archaeology—Greco-Roman Architecture. (2 or 4) Seminar, three hours. Studies in style and iconography of various periods of Aegean, Greek, and Roman architecture. S/U (2-unit course) or letter (4-unit course) grading.

251C. Seminar: Classical Archaeology—Greco-Roman Sculpture. (2 or 4) Seminar, three hours. Studies in style and iconography of various periods of Aegean, Greek, and Roman sculpture. S/U (2-unit course) or letter (4-unit course) grading.

251D. Seminar: Classical Archaeology—Greco-Roman Painting. (2 or 4) Seminar, three hours. Studies in style and iconography of various periods of Aegean, Greek, and Roman painting. May be repeated for credit with consent of instructor. S/U or letter grading.

C251E. Archaeological Field Techniques. (12) Off-campus field archaeology, 36 hours. Preparation: at least one classical archaeology course. Training in techniques of archaeological research in field, including topographic and area survey, mapping and recording artifacts, excavation and data analysis. Conducted in Mediterranean area. Concurrently scheduled with course C151E. S/U or letter grading.

252. Topography and Monuments of Athens. (2 or 4) Lecture, two or four hours; detailed studies in topography and monuments of Athens, combining evidence of literature, inscriptions, and actual remains. S/U or letter grading.

253. Topography and Monuments of Rome. (2 or 4) Lecture, two or four hours. Detailed studies in topography and monuments of ancient Rome, combining evidence of literature, inscriptions, and actual remains. S/U or letter grading.

256. Topics in Ancient Religion. (2 or 4) Seminar, three hours. S/U or letter grading.

287. Graduate Colloquium in Classical Literature. (2) Seminar, three hours. Survey of basic methods of and approaches to classical scholarship, including textual criticism, literary interpretation and theory, hermeneutics, interdisciplinary studies, and computer applications to classics. Emphasis varies from year to year; depending on instructor(s). May be repeated for credit with topic change.

288. Literary Theory. (2 or 4) Discussion, three hours. Designed for graduate students. Introduction to chief texts in literary theory and criticism for readers of classical literature, with application to classical texts. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or senior assistant. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Teaching Classics. (2) Seminar, two hours. Normal to be taken by graduate students in term before or during their first assignments as teaching assistants. Seminar/workshop in various pedagogical
issues and strategies in preparation for teaching classical civilization, Greek, and/or Latin undergraduate courses. Readings and group discussions in topics related to teaching in field of classics. May not be applied toward MA or PhD course requirements. S/U grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA adviser and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. S/U grading.

597. Study for MA Comprehensive Examination or PhD Qualifying Examinations. (2 to 8) Tutorial, to be arranged. S/U grading.


Greek

Lower-Division Courses

1. Elementary Greek. (5) Lecture, three hours; discussion, two hours. P/NP or letter grading.

2. Elementary Greek. (8) Lecture, three hours; discussion, two hours. Enforced requisite: course 1. P/NP or letter grading.

3. Elementary Greek. (5) Lecture, three hours; discussion, two hours. Enforced requisite: course 2. P/NP or letter grading.

4A-8B-8C. Elementary Modern Greek. (4-4-4) Lecture, three hours. Course 8A is enforced requisite to 8B, which is enforced requisite to 8C. Introductory modern Greek sequence, with emphasis on spoken modern Greek. P/NP or letter grading.

8A-9B-9C. Intermediate Modern Greek. (4-4-4) Lecture, three hours. Enforced requisite: course 8C. Course 9A is enforced requisite to 9B, which is enforced requisite to 9C. Intermediate-level program in modern Greek language study from communicative and task-based approach. Continued development of student understanding and use of Greek syntax and morphology through oral and written activities, reading, and listening. Students master basic communicative skills, communicate in everyday real-life situations, comprehend simple passages, announcements, and advertisements, master basic rules of modern grammar and syntax, read fluently, and write accurately. P/NP or letter grading.

15. Elementary Modern Greek. (12) Lecture, 18 to 19 hours. Eight-week intensive introduction to principles of speaking, reading, and writing modern (diegetic) Greek. Offered in summer only. P/NP or letter grading.

16. Intensive First-Year Greek. (12) Lecture, 19 hours. Eight-week intensive introduction to Greek language equivalent to courses 1, 2, and 3. Offered in summer only. P/NP or letter grading.

20. Intermediate Greek. (4) Lecture, three hours; discussion, one hour (when scheduled). Requisite: course 3 or 16. Formal review of Greek grammar and syntax; development of skills in reading original texts of Greek prose. Readings selected to introduce literature and culture of ancient Greece. P/NP or letter grading.

Upper-Division Courses

100. Readings in Greek Prose and Poetry. (4) Lecture, three hours. Requisite: course 20. Introduction to developing skills of reading longer, continuous passages of original Greek prose and/or poetry texts, with attention to literary and cultural background. Course is normally requisite to other courses in Greek 100 series. May be repeated for credit with change of assigned readings and with consent of instructor. P/NP or letter grading.


103. Aeschylus. (4) Lecture, three hours. Requisite: course 100. P/NP or letter grading.

104. Sophocles. (4) Lecture, three hours. Requisite: course 100. P/NP or letter grading.


111. Xenophon. (4) Lecture, three hours. Requisite: course 100. Reading of major work of Xenophon—Memorabilia, Cyropaedia, Anabasis, Hellenica, or Deconomies—in Greek. P/NP or letter grading.

121. Plato. (4) Lecture, three hours. Requisite: course 100. P/NP or letter grading.


131. Readings in Later Greek. (4) Lecture, three hours. Requisite: course 100. Topics vary from year to year and include “Longinus,” On Sublime; Marcus Aurelius; Arrian; Second Sophistic; Plutarch; later epic; epigram; epistolographi Graeci. P/NP or letter grading.


133. Readings in Byzantine Literature. (4) Lecture, three hours. Requisite: course 132. Topics vary from year to year and include Procopius, Agathias, Michael Psellus, Alexiad of Anna Comnena, and Digenis Akritas. P/NP or letter grading.

199. Directed Research in Greek. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

200A-200B-200C. History of Greek Literature. (4-4-4) Lecture, three hours. Lectures on history of Greek literature, supplemented by reading of Greek texts in original language. Each course may be taken independently for credit. S/U or letter grading.

201A-211B. Homer: Iliad. (2 or 4 each) Lecture, three hours. Course 201A is requisite to 201B. S/U (2-unit course) or letter (4-unit course) grading.

202A-202B. Homer: Odyssey and Epic Cycle. (2 or 4 each) Lecture, three hours. Course 202A is requisite to 202B. S/U (2-unit course) or letter (4-unit course) grading.

203. Hesiod. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.

204. Homerics. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.

205. Aeschylus. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.

206A-206B. Sophocles. (2 or 4 each) Lecture, three hours. Course 206A is requisite to 206B. S/U (2-unit course) or letter (4-unit course) grading.

207A-207B. Euripides. (2 or 4 each) Lecture, three hours. Course 207A is requisite to 207B. S/U (2-unit course) or letter (4-unit course) grading.

208A-208B. Aristophanes. (2 or 4 each) Lecture, three hours. Course 208A is requisite to 208B. S/U (2-unit course) or letter (4-unit course) grading.

209A-209B. Seminars: Hellenistic Poetry. (2 or 4 each) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.


211A-211B. Herodotus. (2 or 4 each) Lecture, three hours. Course 211A is requisite to 211B. S/U (2-unit course) or letter (4-unit course) grading.

212A-212B. Thucydides. (2 or 4 each) Lecture, three hours. Course 212A is requisite to 212B. S/U (2-unit course) or letter (4-unit course) grading.

213. Greek Historiography. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.

214. Demosthenes. (2 or 4) Lecture, three hours. S/U (2-unit course) or letter (4-unit course) grading.

215. Early Greek Orators. (2 or 4) Seminar, three hours. Studies in works of Antiphon, Andocide, and Lysias. S/U (2-unit course) or letter (4-unit course) grading.

216. Menander. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.

217A-217B. Greek Lyric Poetry (2 or 4 each) Seminar, three hours. Each course may be taken independently for credit. S/U (2-unit course) or letter (4-unit course) grading. 217A. Archaic Lyric. Study of lyric poetry of Archaic period, both choral and monodic, with elegiac and iambic included. 217B. Pindar and Bacchylides. Study of choral odes of Pindar and Bacchylides, with special attention to conventions of epinician.

220. Greek Novel. (2 or 4) Seminar, three hours. Study of Greek romance and its place in Greek literature. Two texts (Chariton: Chaireas and Callirhoe and Longus: Daphnis and Chloe) studied in some detail. S/U (2-unit course) or letter (4-unit course) grading.

221. Pre-Socratic Philosophers. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.

222A-222B. Plato. (2 or 4 each) Lecture, three hours. Course 222A is requisite to 222B. S/U (2-unit course) or letter (4-unit course) grading.

223A-223B. Aristotle. (2 or 4 each) Lecture, three hours. Course 223A is requisite to 223B. S/U (2-unit course) or letter (4-unit course) grading.

224. Post-Aristotelian Philosophy. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.
Upper-Division Courses

100. Intermediate Latin: Introduction to Reading Latin (4) Lecture, four hours. Enforced requisite: course 20 (may be taken concurrently). Course is designed especially for students with only limited experience in reading original Latin prose and/or poetry texts, with attention to literary and cultural background. Course is required to advanced reading courses. May be repeated for credit twice with change of assigned readings and with consent of instructor. P/NP or letter grading.


103. Lucrètius. (4) Lecture, three hours. Requisite: course 100. P/NP or letter grading.

104. Ovid. (4) Lecture, three hours. Requisite: course 100. P/NP or letter grading.

105A. Beginning Vergil: Selections from Aeneid I-VI. (4) Lecture, three hours. Requisite: course 100. Reading of one or more books from first half of Aeneid, designed especially for students with only limited experience in reading Latin poetry. May be repeated for credit with change in readings and consent of instructor. P/NP or letter grading.

105B. Advanced Vergil. (4) Lecture, three hours. Requisite: course 105A. Course is designed especially for students with only limited experience in reading original Latin prose and/or poetry texts, with attention to literary and cultural background. Course is required to advanced reading courses. May be repeated for credit with change in readings and consent of instructor. P/NP or letter grading.


108. Roman Elegy. (4) Lecture, three hours. Requisite: course 107. Selections from Catullus, Tibullus, and Propertius. May be repeated for credit with change in readings and consent of instructor. P/NP or letter grading.

109. Roman Satire. (4) Lecture, three hours. Requisite: course 108. Readings from authors(s) of Roman satire, including Horace, Persius, and Juvenal, or related satiric texts. May be repeated for credit with change in readings and consent of instructor. P/NP or letter grading.


116. Roman Novel. (4) Lecture, three hours. Requisite: course 115. Reading and discussion of either Petronius’ Satyricon or Apuleius’ Metamorphoses and development of genre of prose novel in antiquity. May be repeated for credit with change in author and text. P/NP or letter grading.


118. Seneca. (4) Lecture, three hours. Requisite: course 117. Selection of Seneca’s works read in Latin, P/NP or letter grading.

119A. Readings in Roman Prose. (4) Lecture, three hours. Requisite: course 118. Readings of selected Roman prose author(s). Topics may vary from year to year and may be organized in terms of chronology (Republican or imperial), epic, lyric, elegy, and/or theme. May be repeated for credit with topic change. P/NP or letter grading.

119B. Readings in Roman Poetry. (4) Lecture, three hours. Requisite: course 119A. Readings of selected Roman poetry author(s). Topics may vary from year to year and may be organized in terms of chronology (Republican or imperial), epic, lyric, elegy, and/or theme. May be repeated for credit with topic change. P/NP or letter grading.


121. Patristic Texts. (4) Lecture, three hours. Requisite: course 120. Reading and discussion of one or more Latin patristic texts (especially works of Ambrose, Augustine, and/or Jerome), with emphasis on specific features of patristic, as opposed to classical, Latin. P/NP or letter grading.


197. Individual Studies in Latin. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Individual intensive study of a selected text with scheduled meeting time between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research in Latin. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200A-200B-200C. History of Latin Literature (4-4-4). Lecture, three hours. Lectures on history of Latin literature, supplemented by reading of Latin texts in original language. Each course may be taken independently for credit. S/U or letter grading.

201. Roman Epic Tradition. (2 or 4) Seminar, three hours. Close study of one epic poet other than Virgil (e.g., Ennius, Lucan, Valerius Flaccus, Statius, Silus Italicus), with attention to literary tradition of epic. May be repeated for credit with topic change. S/U (2-unit course) or letter (4-unit course) grading.

202. Seminar: Catullus. (2 or 4) Seminar, three hours. Detailed consideration of entire Catullan corpus. S/U (2-unit course) or letter (4-unit course) grading.

203A. Elegiac Poetry. (2 or 4) Lecture, three hours. S/U (2-unit course) or letter (4-unit course) grading.

203B. Properdits. (2 or 4) Lecture, three hours. Course 203A is not requisite to 203B. S/U (2-unit course) or letter (4-unit course) grading.

204A-204B. Vergil’s Aeneid. (2 or 4 each) Lecture, three hours. Course 204A is requisite to 204B. S/U (2-unit course) or letter (4-unit course) grading.

205A. Seminar: Vergil’s Bucolics. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.

205B. Seminar: Vergil’s Georgics. (2 or 4) Seminar, three hours. Course 205A is not requisite to 205B. Close reading of Vergil’s text; careful evaluation of influence of criticism on poem, much of it recent; examination of work’s place within tradition of rural poetry. S/U (2-unit course) or letter (4-unit course) grading.

206. Horace. (2 or 4) Lecture, three hours. S/U (2-unit course) or letter (4-unit course) grading.

207. Roman Comedy. (2 or 4) Seminar, three hours. Survey of history of Roman comedy. S/U (2-unit course) or letter (4-unit course) grading.

208. Ovid. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.
209. Seminar: Roman Satire. (2 or 4) Seminar, three hours. Detailed study of one individual satirist, with attention to his position in development of satirical genre in Roman literature. Choice of author varies from year to year. Close study of text, of characteristics of work as social critic and artist, and of contemporary literary and social environment. S/U (2-unit course) or letter (4-unit course) grading.


211A-211B-211C. Seminars: Roman Historians. (2 or 4 each) Seminar, three hours. Study of considerable portions of writings of following historians. Each course may be taken independently for credit. S/U (2-unit course) or letter (4-unit course) grading.

211A. Sallust; 211B. Livy; 211C. Tacitus.

214. Ancient Biography: Roman Lives. (2 or 4) Seminar, three hours. Study of biography in ancient Rome. Literary survey or focused readings on lives of Cornelius Nepos, Suetonius, Tacitus, or imperial chroniclers of 11th century C.E. S/U (2-unit course) or letter (4-unit course) grading.

215. Seminar: Roman Novel. (2 or 4) Seminar, three hours. Close study of one or two novels such as Petronius’ Satyricon and Apuleius’ Metamorphoses: study of literary problems. May be repeated for credit with topic change. S/U (2-unit course) or letter (4-unit course) grading.

216. Seminar: Roman Epic. (2 or 4) Seminar, three hours. Close study of one of rhapsodic text (e.g., Rhetorica ad Herennium, Cicero’s de Oratore, Seneca’s Controversiae or Suasoriae, Quintilian’s Institutio), with attention to its place in rhetorical tradition. May be repeated for credit with topic change. S/U (2-unit course) or letter (4-unit course) grading.

220. Cicero’s Orations. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.

221A. Cicero’s Philosophical Works. (2 or 4) Lecture, three hours. S/U (2-unit course) or letter (4-unit course) grading.

221B. Cicero: De Natura Deorum. (2 or 4) Lecture, three hours. Course 221A is not requisite to 221B. S/U (2-unit course) or letter (4-unit course) grading.

222. Seminar: Roman Stoicism. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.

223. Lucretius. (2 or 4) Lecture, three hours, S/U (2-unit course) or letter (4-unit course) grading.

224. Seneca. (2 or 4) Seminar, three hours. Detailed study of works of Petronius’ Satyricon and Apuleius’ Metamorphoses: study of literary problems. May be repeated for credit with topic change. S/U (2-unit course) or letter (4-unit course) grading.

225. Sappho. (2 or 4) Seminar, three hours. Close study, with attention to literary and historical background, of work of one or several poets who flourished between death of Sappho and fall of Roman Empire. May be repeated for credit with change in author. S/U or letter grading.

226. Topical Studies of Ancient Rome. (2 or 4) Seminar, three hours. Advanced study of some aspect of Latin language or literature or Roman culture. May be repeated for credit with topic change. S/U (2-unit course) or letter (4-unit course) grading.


250. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. S/U grading.


CLUSTER PROGRAM
College of Letters and Science
A265 Murphy Hall
Box 951571
Los Angeles, CA 90095-1571
310-794-5040
http://www.uclalaw.edu/clusters.html

Anthony R. Frisica, PhD, Director
Faculty Committee
Scott H. Chandler, PhD (Integrative Biology and Physiology) Rafaelia D’Auria (Environment and Sustainability) Jeffrey L. Decker, PhD (English) Joshua F. Dienstag, JD, MA (Law, Political Science) Anthony R. Frisica, PhD (Integrative Biology and Physiology) Paul T. Hsu, PhD, MPH (Epidemiology) Stephanie W. Jamison, PhD (Asian Languages and Cultures) Vilma Ortiz, PhD (Sociology) Michelle A. Rensei, PhD (Society and Genetics) Abigail C. Sayagu, PhD (Gender Studies, Sociology)

Scope and Objectives
Cluster courses are an option for satisfying both general education and Writing II requirements. Clusters are yearlong, collaboratively taught, interdisciplinary courses that focus on a topic of timely importance, such as climate change, pollution, and overpopulation. Laboratory exercises included in discussions. M1CW. Special Topics. Seminar, three hours. Enforced requisite: course M1B. Examination of specialized environmental and sustainability topics as they relate to food, including air, water, biodiversity, climate change, food access, food security, and health. Satisfies Writing II requirement.

M1A-M1B-M1CW. Food: Lens for Environment and Sustainability. (6-6-6) Course M1A is enforced requisite to M1B, which is enforced requisite to M1CW. Limited to first-year freshmen. Letter grading. M1A-M1B. Lecture, three hours; discussion, two hours. Examination of nature and meaning of race in American society through study of history, literature, and law. Consideration, among other topics, of construction of race as social and cultural category, two or more groups and exploration of ways in which race has shaped understanding of American citizenship. M1CW. Special Topics. Seminar, three hours. Enforced requisite: course M1B. Examination of global problems, including climate change, pollution, and overpopulation. Laboratory exercises included in discussions. Cluster students are eligible for Honors Collegium credit. For the current cluster course offerings and general education credit, refer to the clusters website.
two hours. Exploration of causes and mechanisms of globalization as well as its consequences. Critical examination of globalization theories, international institutions of trade, finance, governance, and overall impact of globalization on human society. 52CW. Special Topics. Seminar, three hours. Enforced requisite: course 22B, and English Composition 3 or 3H or English as a Second Language 36. Topics may include global governance, development, and health. Satisfies Writing II requirement. 23A-23B-23CW. Inside Performing Arts: Interdisciplinary Exploration of Performance in Society and Culture. (5-5-5) Course 23A is enforced requisite to course 23B, which is limited to first-year freshmen. Lecture grading. 23A-23B. Lecture, four hours; discussion, two hours. Introduction to historical development and evolution of performing arts, aesthetic theories and practices, and political, social, and cultural contexts within which performance has evolved. 23CW. Special Topics. Seminar, three hours. Enforced requisite: course 23B, and English Composition 3 or 3H or English as a Second Language 36. Topics include origins and ideas of performance art, and performance, and music as cultural expression. Satisfies Writing II requirement. M24A-M24B-M24CW. Work, Labor, and Social Justice in Urban America as Labor and Workplace Places. Studies M1A-M1B-M1CW. Course M24A is enforced requisite to M24B, which is enforced requisite to M24CW. Limited to first-year freshmen. Letter grading. M24A. Lecture, three hours; discussion, two hours. Exploration of ways in which work has been transformed over last century, impact of this transformation on working people, and role of labor movement as forces for social change. M24B. Lecture, three hours; discussion, two hours. Examination of topics in depth of particular mythological perspective. M24CW. Seminar, three hours. Enforced requisite: course M24B. Topics include labor history, gender, race, and workplace. Satisfies Writing II requirement. 25A-25B-25CW. Politics, Society, and Urban Culture in East Asia. (6-6-6) Course 25A is enforced requisite to 25B, which is enforced requisite to 25CW. Limited to first-year freshmen. Letter grading. 25A. Lecture, three hours; discussion, two hours. Comprehensive exploration of historical evolution of popular East Asian urban culture and interrelationship of East Asian political, social, and economic urban cultural expression. 25CW. Special Topics. Seminar, three hours. Enforced requisite: course 25B. In-depth examination of issues in historical and contemporary urban popular culture. Satisfies Writing II requirement. 26A-26B-26CW. Poverty and Health in Latin America. (6-6-6) Course 26A is enforced requisite to 26B, which is enforced requisite to 26CW. Limited to first-year freshmen. Letter grading. 26A. Lecture, three hours; discussion, two hours. Examination of poverty-related health inequities and possible solutions to promote improved health outcomes in low-resource populations, illustrated through examples of current programs and policies. Major areas for addressing health inequity include governance, community action, social justice, and human rights movements, health sector financing, and public health programs, and global priorities. Introduction to tools to promote health, such as service delivery, health workforce, information systems, access to biomedical and biological sciences, health systems governance. 26CW. Special Topics. Seminar, three hours. Enforced requisite: course 26B. Students meet weekly in small group seminars based on topics. Course theme to allow them to pursue study, discuss, and then generate policy solutions to create more equitable healthcare in Latin America. Focus on one particular area of Latin America or one local Latin American community to reflect field study sites to eventually be offered and serve as preparation for summer field study component. Satisfies Writing II requirement. 30A-30B-30CW. Never-Ending Stories: Multidisciplinary Perspectives on Myth. (6-6-6) Course 30A is enforced requisite to 30B, which is limited to first-year freshmen. Letter grading. 30A-30B. Lecture, three hours; discussion, two hours. Exploration in depth of particular mythological perspectives, role of myth in culture, society, and/or art, and contributions of various disciplines to study of myth. 30CW. Special Topics. Seminar, three hours. Enforced requisite: course 30A. Topics may include biological origins of sex differences, sex/gender, and politics of sex research. 40A-40B-40CW. Chinese Classics, Their Legacy in East Asia, and Reimagination in Modern Times. (6-6) Course 40A is enforced requisite to 40B, which is enforced requisite to 40CW. Limited to first-year freshmen. Letter grading. 40A-40B. Lecture, three hours; discussion, two hours. Learning in traditional China was defined through mastery of canon of classic texts that students memorized as part of their education. These classics were also taught in Vietnam, Japan, and Korea, and served to create cultural ties across East Asia. Many more texts came to be considered classics—works of enduring value,-read by almost all East Asians, including religious scriptures, legal codes, novels, paintings, and performances. Exploration of how Chinese classics have been used and reimagined in different places and times to demonstrate enduring importance of these texts and cultural artifacts. Emphasis on how these works were interpreted throughout East Asia, relationship with past, and how shared discourses continue to be relevant today. 40CW. Special Topics. Seminar, three hours. Enforced requisite: course 40B. In-depth examination of Chinese classic texts and their reimaginations in modern times. Satisfies Writing II requirement. 50A-50B-50CW. America in Sixties: Politics, Society, and Culture, 1954 to 1974. (6-6-6) Course 50A is enforced requisite to 50B, which is enforced requisite to 50CW. Limited to first-year freshmen. Letter grading. 50A-50B. Lecture, three hours; discussion, two hours. Interdisciplinary exploration of U.S. society from Brown versus Board of Education (1954) to resignation of President Nixon (1974). Course 50A is enforced requisite to 50B. Lecture grading. 50CW. Special Topics. Seminar, three hours. Enforced requisite: course 50A. Topics may include origins and ideas of performance art, and performance, and music as cultural expression. Satisfies Writing II requirement. 70A-70B-70CW. Evolution of Cosmos and Life. (6 each) Course 70A is enforced requisite to 70B, which is enforced requisite to 70CW. Limited to first-year freshmen. Lecture grading. 70A-70B. Lecture, three hours; discussion, two hours. Examination of evolution in cosmos from life sciences perspective. Satisfies Writing II requirement. 70DW. Special Topics in Physical Sciences. Seminar, three hours. Enforced requisite to course 70B. Examination in depth of various issues of evolution in cosmos from physical sciences perspective. Satisfies Writing II requirement. M71A-M71B-M71CW. Biotechnologies in Society. (6-6-6) (Formerly numbered 71A-71B-71CW) (Same as Society and Genetics M71A-M71B-M71CW) Course M71A is enforced requisite to M71B, which is enforced requisite to M71CW. Limited to first-year freshmen. Letter grading. M71A-M71B. Lecture, three hours; discussion, two hours. Exploration of methods, applications, and implications of biotechnology and of interests that may lead to biotechnology. Satisfies Writing II requirement. M72A-M72B-M72CW. Sex from Biology to Gendered Society. (6-6-6) (Formerly numbered 72A-72B-72CW, formerly numbered 72A-72B-72CW, formerly numbered 72A-72B-72CW) Course M72A is enforced requisite to M72B, which is enforced requisite to M72CW. Limited to first-year freshmen. Letter grading. M72A-M72B. Lecture, three hours; discussion, two hours. Examination of many ways in which sex and sexual identity shape and are shaped by biological and social forces, approached from complementary perspectives of anthropology, biology, medicine, and sociology. Specific topics include biological origins of sex differences, intersex, gender identity, sex differences, sex/gender, and politics of sex research. M72CW. Special Topics. Seminar, three hours. Enforced requisite: course M72B. Topics may include politics of reproduction, sexuality, sexual identity, social construction of gender, and reproductive technologies. Satisfies Writing II requirement. 73A-73B-73CW. Mind over Matter: History, Science, and Philosophy of Mind. (6-6-6) (Formerly numbered 73A-73B-73CW) Course 73A is enforced requisite to 73B, which is enforced requisite to 73CW. Limited to first-year freshmen. Letter grading. 73A-73B. Lecture, three hours; discussion, two hours. Examination of many ways in which mind and matter interface in universe and last major organ system to be understood. Our brains give us power to see and hear, learn and remember, interpret others, and act purposefully in our environment. We cannot take for granted, naturally over time or as result of injury or disease. Brain function from historical, biological, psychological, and philosophical perspectives to enable students to better understand organ responsible for all mental processes and behavior in health and disease and to encourage them to think and write critically about interaction of neurobiological, philosophical, and psychological perspectives that control behavior and our experiences as human beings. Use of historical perspective to better understand how field of neuroscience and study of brain have emerged over time. 73CW. Special Topics. Seminar, three hours. Enforced requisite: course 73B. Topics include mental illness, neuroscience in popular culture, and neuroscience of decision making. Satisfies Writing II requirement. 80A-80B-80CW. Frontiers in Human Aging. (6-6-6) Course 80A is enforced requisite to 80B, which is enforced requisite to 80CW. Limited to first-year freshmen. Letter grading. 80A-80B. Lecture, three hours; discussion, two hours. Examination of aging process from vantage points of multiple disciplines, including biology, psychology, sociology, ethics, and public policy. Study of biomedical and biological aging, psychological, social, and political implications of phenomena. 80CW. Special Topics. Seminar,
three hours. Enforced requisite: course 90B. In-depth examination of gender and aging, cellular aging, cancer, and aging of brain. Satisfies Writing II requirement.

97A. Cluster Colloquia: Variable Topics. (1) Seminar, one hour. Variable topics course designed for students who have completed one GE cluster. Study, through small-group discussion and projects, of selected topics related to one cluster theme or topic. Consult Schedule of Classes for topics and instructors. May be repeated once for credit. P/NP grading.

COMMUNICATION
College of Letters and Science

2303 Rolfe Hall
Box 951538
Los Angeles, CA 90095-1538

310-825-3303
commstudies@ucla.edu
http://www.commstudies.ucla.edu

Kerri L. Johnson, PhD, Chair

Professors
Steven E. Clayman, PhD
Tim J. Groeling, PhD
Marte G. Haselton, PhD
Kerri L. Johnson, PhD
Neil M. Malamuth, PhD
Lynn Vavreck Lewis, PhD

Professors Emeriti
Charles Goodwin, PhD
William W. Johnson, PhD
Paul L. Rosenthal, PhD
John H. Schumann, PhD

Associate Professors
Gregory A. Bryant, PhD
Francis F. Steen, PhD

Assistant Professors
Jungseok Joo, PhD
Georgia C. Kernell, PhD
P.J. Lamberson, PhD

Senior Lecturers
Marde S. Gregory, MA, Emeritus
Thomas E. Miller, MA
Steven M. Peterson, PhD
Paul Von Blum, JD, Emeritus

Lecturers
Nushin Arbabzadah, MPhil
Dea A. Bridgewater, PhD
Celia Feramisco, MBA
Keith A. Fink, JD
Mark A. Huppin, JD, PhD
Raffi Kassabian, JD
Karyl K. Kicinski, PhD
John Kochian, MA
Nazo L. Kouloukian, JD
Karen S. Mack, MA
Judith B. Milestone, MA
James S. Newton, BA
Michael W. Suman, PhD

Adjunct Assistant Professors
Abigail H. Goldman, MS
Barry A. Sanders, JD

Scope and Objectives

The major in Communication Studies is an interdisciplinary curriculum leading to a Bachelor of Arts degree. It seeks to provide students with a comprehensive knowledge of the nature of human communication, the symbol systems by which it functions, the environments in which it occurs, its media, and its effects. Em-
ability to analyze, organize, and critically think about communicative messages while becoming better equipped to articulate ideas. P/NP or letter grading.

1A. Public Speaking for Nonnative Speakers. (4) Lecture, four hours. Designed for nonnative speakers of English to increase fluency and vocabulary, and to improve presentation skills, language usage, reasoning, style, and delivery. Conversation and pronunciations practice. Focus on theory and practice of public speaking, including the function of content, organization of ideas, language, and delivery. Practice in extemporaneous and manuscript speaking. Critical analysis of speeches in both contemporary and historical settings. Encompasses arguments on group discussions, evaluations, practice of both public and private speaking skills. Offered in summer only. P/NP or letter grading.

1B. Learning American English and Culture from Movies. (4) Lecture, four hours. Advancement of students’ fluency in conversational English while increasing their awareness of American popular culture. Primer on American-style colloquial English and nuances of contemporary customs and values offered through guided immersion in popular cinema. Offered in summer only. P/NP or letter grading.

10. Introduction to Communication Studies. (5) Lecture, four hours; discussion, one hour. Introduction to fields of study and interpersonal communication. Study of modes, media, and effects of mass communication, interpersonal processes, and communication theory. Letter grading.


103A-103B. Forensics. (4-4) Lecture, three hours. Participation in on-campus and intercollegiate forensics activities, including exposure to full-talent competitive forensic events. Students practice public address, interpretation of literature, debate, oratory, and extemporaneous speaking and engage in independent research and analysis. P/NP or letter grading. 103A. Basic preparation. 103B. Advanced practice in speech.

104. Analysis and Briefing. (4) Lecture, three hours. Intensive study of selected political or social issues, preparation of bibliographic survey of issues and arguments. P/NP or letter grading.

120. Group Communication. (4) Lecture, four hours. Examination of types of communication that occur in close relationships, especially romantic relationships. In-depth coverage of variety of relationship topics, including intimacy, stages of intimate relationships, why we choose to get involved with some people as opposed to others, flirting, and self-disclosure. P/NP or letter grading.

123W. Talk and Body. (5) Same as Anthropology M157W). Lecture, four hours; discussion, one hour. Focus on American English Communication in cultural contexts. Lectures and readings represent the wide range of influences on which culture develops, including historical, social, and biological factors.

126. Evolution of Interpersonal Communication. (4) Lecture, four hours. Examination of current issues in interpersonal communication from perspectives of evolutionary psychology, biology, and sociobiology. Topics include coevolution of signaler and receiver adaptations, nonverbal communication, courtship behavior, miscommunication, and deception. P/NP or letter grading.

127. Animal Communication and Body Language. (4) Same as Psychology M137B.) Lecture, three hours. Examination of nonverbal communication convey meaningful information to perceivers, with focus on both production and perception of multiple communication formats (e.g., affect expression of face and body, gesture, and kinematics), with strong emphasis on body language. Readings from variety of related fields. P/NP or letter grading.


129. Voice and Its Perception. (4) Lecture, four hours. Focus on human voice conveys information about identity of speakers, physical characteristics, personality, and emotional state, and on how listeners utilize this information to make judgments about speakers. Letter grading.

132. Talk and Social Institutions. (4) Same as Sociology CM125.) Lecture, four hours; discussion, one hour. Designed for juniors/seniors. Practices of communication and social interaction in major institutional sites in contemporary society. Setting varies but may include emergency services, police and courts, medicine, news interviews, and political oratory. P/NP or letter grading.

134. Animal Communication and Body Language. (4) Same as Psychology M137B.) Lecture, three hours. Examination of nonverbal communication convey meaningful information to perceivers, with focus on both production and perception of multiple communication formats (e.g., affect expression of face and body, gesture, and kinematics), with strong emphasis on body language. Readings from variety of related fields. P/NP or letter grading.

135. Understanding Relationships. (4) Lecture, four hours. Focus on understanding types of communication that occur in close relationships, especially romantic relationships. In-depth coverage of variety of relationship topics, including intimacy, stages of intimate relationships, why we choose to get involved with some people as opposed to others, flirting, and self-disclosure. P/NP or letter grading.

136. Communication and Conflict in Couples and Families. (4) Lecture, three hours. Examination of (1) dynamics of communication in couples and families and (2) relationship of these processes to individual psychopathology, marital discord, and family disruption (e.g., separation and divorce). P/NP or letter grading.

M117. Negotiation. (Same as Labor and Workplace Studies M117.) Lecture, four hours. Art and science of negotiation in securing agreements between independent parties. Theory and practice that underlie process, with focus on successful negotiation in which students learn broad array of negotiation skills, including identifying one’s own (and others’) communication style, identifying and incorporating components of successful negotiation, and resolving conflict between parties. Letter grading.

M118. Language and Music. (Same as Music M118.) Lecture, three hours. Focus on human voice conveys information about identity of speakers, physical characteristics, personality, and emotional state, and on how listeners utilize this information to make judgments about speakers. Letter grading.

M120. Group Communication. (4) Lecture, four hours. Examination of group communication from perspectives of evolutionary psychology, communications, and psycholinguistics. Topics include evolution of cooperation, ingroup and outgroup dynamics, gossip, music improvisation, and conversational behavior. P/NP or letter grading.

M123W. Talk and Body. (5) Same as Anthropology M157W). Lecture, four hours; discussion, one hour. Focus on American English Communication in cultural contexts. Lectures and readings represent the wide range of influences on which culture develops, including historical, social, and biological factors.
128. Play and Entertainment. (4) Lecture, three hours. Entertainment is significant component of both interpersonal and mass communication. Examination of evolutionary history, cognitive mechanisms, and social dimensions of play and entertainment, as well as the possible pedagogical effects. Letter grading.
129. Gaming Mind. (4) Lecture, three hours. Exploration of various aspects of online computer games that are becoming increasingly popular and technically sophisticated, with focus on what people learn from games and whether learning is potentially useful. Letter grading.


133. Decoding Media Strategies. (4) Lecture, three hours. Today's media are big business, central part of cultural identity, and vital component of democracy. How do these different and often conflicting functions determine content of mass media? Examination of function of communication in advertising, nature of entertainment and mass culture, practice of propaganda, and changing patterns of media ownership. Assessment of impact of mass media on individuals and social institutions. Letter grading.

136. Media Portrayals of Gays and Lesbians. (4) Lecture, three hours. How mass media have portrayed gays and lesbians and why. Media's depiction, portrayal, and handling of homosexuality, with particular focus on how gays and lesbians have been negatively stereotyped, portrayed unrealistically, and often not portrayed at all. Examination not only of how gays and lesbians have been represented, but also why certain portrayals have tended to dominate. P/NP or letter grading.

M137. Transnational Bollywood. (4) (Same as Asian American Studies M137) Lecture, three hours. Study of how popular Bollywood cinema materializes colonial and postcolonial formations pertaining to gender, class and caste, sexuality, race, and economic liberalization in South Asia, as well as across South Asian communities in North America, U.K., and Africa. Examination of how complex relationships between Bollywood and transnational South Asian diasporas enable us to better understand South Asian American communities. P/NP or letter grading.

140. Theory of Persuasive Communication. (4) Lecture, four hours. Dynamics of communication designed to influence human conduct; analysis of structure of persuasive messages, illustration of principles of persuasion, and materials from relevant disciplines of humanities and social sciences. Letter grading.

141. Films of Persuasion: Social and Political Advocacy in Mass Society. (4) Lecture, four hours. Films often provide commentary about public issues. Examination of how films communicate to large audiences about history, society, and politics. Critical evaluation of these works to understand power and limitations of films as social persuasion. Letter grading.

143. Rhetoric of Popular Culture. (4) Lecture, three hours. Rhetorical approach to study of U.S. popular culture. Examination, both at theoretical level and through specific case studies, of ways in which popular cultural texts perform rhetorically to influence political and social struggles shaping everyday life. How do particular artifacts or communicative texts constitute source for (re)negotiation of cultural meanings as well as greater understanding of ways language functions as vehicle for human action. Letter grading.

M144A-M144B. Conversational Structures I, II. (4-4) (Same as Sociology M144A-M144B) Lecture, three hours; discussion, one hour. P/NP or letter grading. M144A. Introduction to some structures that are employed in organization of conversational interaction, such as turn-taking organization, organization of repair, and some basic sequence structures with limited expansions. M144B. Requisite: course M144A. Consideration of some more expanded sequence structures, story structures, topical sequences, and overall structural organization of single conversations.

145. Situation Comedy and American Culture. (4) Lecture, three hours. Historical analysis of sitcom genre from its beginning to late 1990s to present. Investigation of how sitcoms have influenced American life and culture and how American life and culture have influenced sitcoms. Exploration of issues of family, race and ethnicity, class and economy, gender roles, and political culture. P/NP or letter grading.

146. Evolution of Mass Media Images. (5) Lecture, four hours; discussion/laboratory, one hour. Analysis of evolutionary psychology as basis for images selected for mass media and/or minoritization in entertainment, advertising, and informational communication. Letter grading.

M147. Sociology of Mass Communication. (4) (Same as Sociology M176.) Lecture, four hours; discussion, one hour (when scheduled). Studies in relationship between mass communication and social organization. Topics include history and organization of major media institutions, social forces that shape production of mass media news and entertainment, selected studies in media content, and effects of media on society. P/NP or letter grading.

148. Integrated Marketing Communications. (4) Lecture, three hours. Examination of key concepts and methods of communications in both traditional and digital media. Development and execution of communications strategies, with primary emphasis on consumer insight, branding, market segmentation and positioning, message strategy, program execution, and evaluation of marketing communications through appropriate media technologies. Letter grading.

M149. Media: Gender, Race, Class, and Sexuality. (5) (Same as Gender Studies M149 and Labor and Workplace Studies M149.) Lecture, four hours; activity, one hour. Limited to junior/senior Communication Studies and Gender Studies majors and Labor and Workplace Studies minors. Examination of manner in which media culture induces people to perceive various dominant and dominated and/or colonized groups of people. Ways in which women, gay, lesbian, bisexual, transgendered, racial, and ethnic marginalized peoples, class relations, and other subaltern or subordinated groups are presented and often misrepresented in media. Investigation and employment of practical applications of communications and feminist theories for understanding ideological nature of stereotyping and politics of representation through use of media presentations, lectures, class discussions, and readings. Introduction to theory and practice of cultural studies. Letter grading.


151. Computer-Mediated Communication. (4) Lecture, four hours. Examination of how computer technology, particularly Internet, has influenced patterns of human communication. History and distinctiveness of computer-mediated communication (CMC); CMC's influence on modern economic, political, and social interaction. Letter grading.


M153. Media and Aggression against Women. (4) (Same as Gender Studies M153.) Lecture, three hours. Social scientific study of intersection between mass media and men's aggression against women. Particular consideration of sexual aggression, pornography, and characteristics of aggressive men. Analysis of intersection between culture and nurture. Letter grading.

154. Social Communication and New Technology. (4 Lecture, four hours. Internet's digital core was designed for military command. Yet emerging network was gradually co-opted to perform communicative functions such as gossip, dating, news, entertainment, and trade. Exploration of history, social forces and technological effects, and possible futures of digital communication. Letter grading.

155. Artificial Intelligence and New Media. (4) Lecture, three hours. Review of origin and modern development of artificial intelligence and its recent breakthroughs, with special emphasis on its usages of media industry (personalization, recommendation, and target advertising). Study includes technical merits and controversies such as ethical and moral issues of AI, privacy concerns in data collection, and fair use of AI in general. P/NP or letter grading.

156. Social Networking. (4) Lecture, three hours. Investigation of how new online social networks have facilitated interpersonal interactions for knowledge sharing, romance, business, politics, and entertainment. Critical investigation of current popular social networking websites (e.g., Facebook, MySpace, Friendster, You Tube) through social network analysis and other social science research methods. P/NP or letter grading.

157. Celebrity, Fame, and Social Media. (4) Lecture, three hours. Analysis of how personal lives of media-created celebrities impact self-esteem, connectedness, and personal relationships from cultural studies and social sciences perspectives, and how entities cultivate celebrity for financial gain. Topics include celebrity gossip and privacy, news sharing, public relations, and impact of social media on fan support, image construction, and damage control. P/NP or letter grading.

158. Revolutions in Communication Technology. (4) Lecture, three hours. Study of dynamic processes of innovation in history of communication from its earliest expressions to information age. Examination of developments in speech, images, and writing. Investigation of interactions of cognitive factors, social change, and technological innovation. Letter grading.

M159. Pornography and Evolution. (4) (Same as Gender Studies M159.) Lecture, three hours. Discussion of theories and research on why pornography exists and its effects. Use of topic to illustrate value of evolutionary theory to social sciences generally. Letter grading.

160. Political Communication. (4) Lecture, four hours; discussion, one hour. Study of nature and function of communication in political sphere; analysis of contemporary and historical communications within established political institutions; state paper; deliberative discourses; electoral campaigns. Letter grading.

162. Presidential Communication. (4) Lecture, three hours. Examination of historical evolution of presidential communication environment, resources, and strategies, as well as how presidential campaign communication has evolved over time and implications for how presidents govern. Letter grading.


164. Entertainment Law. (4) Lecture, three hours. Various issues in entertainment industry, with primary focus on business, legal, and free speech-related concepts. P/NP or letter grading.

M165. Agitational Communication. (4) (Same as Labor and Workplace Studies M175.) Lecture, four hours; discussion, one hour (when scheduled). Theory of agitation; agitation as force for change in existing institutions and policies in democratic society. Intensive study of selected history, social forces and techniques of their communications. Letter grading.
Scope and Objectives
The Department of Community Health Sciences is concerned with health equity and well-being for all individuals and communities. To understand and foster optimal health among diverse communities, the mission of the department is to (1) prepare students to be interdisciplinary global leaders who can effectively address persistent and emerging public health issues, (2) conduct and disseminate innovative research on the social determinants of health, (3) translate the findings for public health practice, and (4) collaborate with communities in research and training.

The department offers schoolwide professional (MPH and DrPH) and academic (MS and PhD) degree programs. Graduates of the professional programs assume positions in the planning, administration, and evaluation of public health programs and policies in the U.S. and abroad. Graduates of the academic programs assume teaching, research, and managerial positions in universities, government agencies, nongovernmental organizations, international health agencies, and research centers.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Community Health Sciences offers Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Community Health Sciences and a Master of Public Health for Health Professionals (MPH-HP) degree. A concurrent degree program (Community Health Sciences MPH/Urban Planning MURP) is also offered.

Community Health Sciences

Lower-Division Courses

48. Nutrition and Food Studies: Principles and Practice. (4) Lecture, three hours; discussion, one hour. Overview of nutritional sciences and public health nutrition. Examination of basic science concepts of nutrition and application of them to student lives and real-world issues through lectures, diet analysis, activities, reports, discussion of video and reading assignments, and reviews of community programs that apply nutrition and behavior theory to improve health of public. Description of components of diets and food sources, including proteins, fats, carbohydrates, vitamins, and minerals and their roles in maintaining body health. Exploration of aspects of social, cultural, behavioral, and environmental causes of chronic disease. Letter grading.

60. Intergroup Dialogue: Peer Dialogue. (2) Seminar, two hours. Discussion on issues of difference, conflict, and community to facilitate understanding between social/cultural groups. Student participation in semi-structured face-to-face meetings with students from other social identity groups to learn from each others’ perspectives, read and discuss relevant reading material, and explore their own and other groups’ experiences in various social and institutional contexts. Exploration of ways of taking action to create change and bridge differences at interpersonal and social/community levels. P/NP or letter grading.

80. FITTED: Fitness Improvement Training through Exercise and Diet. (1) Lecture, one hour; activity, two hours. Success in undergraduate experience is very much influenced by attributes beyond intellectual competence. Examination of personal, social, and environmental factors that influence college students’ eating behaviors, physical activity patterns, and body image. Development of individualized student plans for eating well, being active, and feeling good about their bodies. Learning of practical skills with application to nutrition, physical activity, positive body image, stress management, and other aspects of wellness as students participate in critical evaluation of popular diets, healthy body weights, fitness, supplements, media body ideals, and self-destructive thoughts. P/NP grading.

91. Peer Health Counselor Training. (4) Lecture, four hours. Limited to students in Peer Health Counselor Program. Analysis of public health issues as related to campus healthcare delivery system and to healthcare consumer. Identification of health needs, determination of appropriate resources, delivery of preventive and self-care education, and delineation of peer health counselor’s role. P/NP or letter grading.

Upper-Division Courses
110. Introduction to Community Health Sciences. (4) Lecture, four hours. Limited to students in Public Health minor and graduate students. Introductory course to provide non-Community Health Sciences MPH and qualified undergraduate students with broad and comprehensive overview of concepts, empirical research, and public health practice in community health sciences, with emphasis on social context and determinants of population health and principles of planning interventions to protect and improve public health. Ways to define and measure health and illness, social construction of illness, social and behavioral determinants of health, and health disparities, including socioeconomic status, race/ethnicity, gender, and age. Social and behavioral theories of health-related behavior change, health promotion strategies and methods, and public policy. Case studies of evidence-based health promotion programs provided. Letter grading.

130. Nutrition and Health. (4) Lecture, three hours; laboratory, one hour. Preparation: one biology course, one chemistry course. Basic and clinical nutrition theory and practice for students in health sciences curricula. P/NP or letter grading.

131. Healthy Food Access in Los Angeles: History and Practice of Urban Agriculture. (4) Lecture, three hours; laboratory, 90 minutes. History and recent revival of urban agriculture (gardening) in Los Angeles area. Exploration of how urban gardening is response to crises such as U.S. obesity epidemic and resulting health problems. Critiques of industrial agriculture in California and elsewhere in U.S. Exploration of how urban agriculture springs from healthy food/active living and consumer movements that advocate access to locally grown, in-season, affordable food. Biweekly hands-on gardening laboratory in Sunset Canyon Recreation Center Organic Garden. P/NP or letter grading.

132. Health, Disease, and Health Services in Latin America. (4) Lecture, four hours. Introduction to health, disease, and health services in Latin America, with emphasis on epidemiology, health administration, medical anthropology, and nutrition. P/NP or letter grading.
183A-188B. Special Courses in Community Health Sciences. (2-4) Lecture, two hours (188B) and three hours (188A). Examination of current topics or particular subfields or experimental or temporary courses in community health sciences. Specific topic areas vary with the instructor. May be repeated for credit with topic change. P/NP or letter grading.

195. Community or Corporate Internships in Community Health Sciences. (4) Tutorial, six hours. Limited to juniors/seniors. Individualized experience in community agency or business. Further supervision provided by public health organization for which students do internship. Students meet on regular basis with instructor for feedback and evaluation of their experience. May be repeated for credit. Individual contract with supervising placement sponsor required. P/NP or letter grading.

197. Individual Studies in Community Health Sciences. (2 to 4) Tutorial, four hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200. Global Health Problems. (4) Lecture, two hours; discussion, two hours. Overview of health profile of world in the century. Global health problems and methods by which they have been dealt in context of Alma Ata goal of health for all by year 2000. Letter grading.

205. Immigrant Health. (4) Lecture, two hours; discussion, one hour. Limited to graduate students. Overview of key topics in public health for documented and undocumented immigrants and refugees in U.S. Demographics, health status, behavioral risk factors, and social determinants, health and human rights, and access to healthcare and prevention services. Analysis of health policies and cross-cultural skills necessary to develop integrated approach to health of immigrant populations. Letter grading.

210. Global Health Problems. (4) Lecture, two hours; discussion, one hour. Limited to graduate students. Overview of key topics in public health for documented and undocumented immigrants and refugees in U.S. Demographics, health status, behavioral risk factors, and social determinants, health and human rights, and access to healthcare and prevention services. Analysis of health policies and cross-cultural skills necessary to develop integrated approach to health of immigrant populations. Letter grading.

211A-211B. Program Planning, Research, and Evaluation in Community Health Sciences. (2 to 4) Lecture, two hours; discussion, one hour; outside assignments, eight hours. Course 211A is requisite to 211B. Development, planning, and administration of public health programs in community settings. Introduction to range of research methods and techniques used in designing and conducting health research, with particular emphasis on evaluation of community-based public health programs. Course organized into two segments. Letter grading. Requisite: course 210; 211B. Requisites: courses 210, 211A, and Biostatistics 100A or Epidemiology 100.


216. Qualitative Research Methodology. (4) Same as Anthropology M284A.) Seminar, three hours; laboratory, one hour. Intensive seminar/field course in qualitative research methodology. Emphasis on using qualitative methods and techniques in research and evaluation related to healthcare. Letter grading.

218. Questionnaire Design and Administration. (4) Same as Epidemiology M218.) Lecture, four hours. Enforced requisites: Biostatistics 100B and 200C. Design, testing, field use, and administration of data collection instruments, with particular emphasis on questionnaires. Letter grading.

219. Theory-Based Data Analysis. (4) Seminar, three hours. Enforced requisites: Biostatistics 100A, 100B, 406. Translation of theory into data analytic plan, its application to real data, and interpretation of results obtained through analysis. Analysis of quantitative data using range of multivariate techniques, such as linear multiple regression and logistic regression. Analysis of theoretical problem using student quantitative data or public use data. Letter grading.

220. Racism and Public Health: Social Epidemiologic Approaches. (4) Seminar, two hours; discussion, one hour. Requisite: Biostatistics 100B. Integration of social epidemiologic methods and critical approaches to study of racial stratification and public health, with focus on (1) conceptualizing racism-related factors as social determinants of health, (2) building methodological competence for conducting research on racism as social determinant of health, and (3) developing critical self-consciousness to better understand how persons’ racial- or racism-related perspectives and experiences might inform their research. Letter grading.

222. Understanding Fertility: Theories and Methods. (4) Same as Sociology M206.) Lecture, three hours. Preparation: Biostatistics 100B. Application of demographic theories and methods to describe fertility trends and differentials and social and proximate determinants of fertility, other related aspects of the understanding key proximate determinants. For advanced students interested in population, demography of health, and social demography. Letter grading.

224. Social Determinants of Nutrition and Health. (4) Lecture, three hours. Requisite: course 222. Preparations: one basic nutrition course. Health promotion strategies aimed at reducing chronic disease risk through lifestyle changes have not been particularly successful in addressing needs of socioeconomically

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disadvantaged groups. Overview of literature supporting relationship between socioeconomic disadvantage and food-related health conditions such as obesity, diabetes, and osteoporosis. Critical examination of plausible pathways from perspectives of multidisciplinary nutrition, sociological, and more, with focus on linkages between social and physical environment (including built environment) and food equity/access; discussion of how food may be catalyst for improving social capital and health. Discussion of examples of local and international efforts to improve access to healthy foods and/or limit access to unhealthy foods. Exploration of methods for addressing social causes and food-related aspects of neighborhood environments. S/U or letter grading.

225. Writing for Publication in Public Health. (4) Seminar, four hours. Requisites: course 219, two graduate courses; one, one graduate epidemiology course. Development of skills for advanced doctoral students in producing peer-review-quality research papers, with focus on theoretically informed empirical research papers. Examination of other types of manuscripts (e.g., reviews) included. Letter grading.


229. Policy and Public Health Approaches to Violence Prevention. (4) Lecture, four hours. How policies relate to violence and development of skills to transmit this knowledge. Examination of wide range of policy topics and how each might be associated with reduction/increase in violence/violent injury. Letter grading.

230. Family and Sexual Violence. (4) Lecture, three hours; community, three to four hours. Examination of rape, incest, and elder abuse. Emphasis on identification of definitions, causes, outcomes of research on family and sexual violence, as well as response of social service, medical, and criminal justice systems. Letter grading.

231. Maternal and Child Nutrition. (4) Lecture, four hours. Nutrition of mothers, infants, and children in countries at various levels of socioeconomic development. Focus on vulnerable groups: preterm birth, undernutrition, and calorie/malnutrition; relationship between nutrition and mental and physical development; impact of ecological, socioeconomic, and cultural factors on nutrition, nutrition-disorders. Letter grading.

232. Determinants of Health. (4) (Same as Health Policy M242.) Lecture, three hours; discussion, one hour. Designed for graduate students. Critical analysis of models for what determines health and evidence for social, environmental, genetic, health system, and other factors that influence health of populations and defined subgroups. Letter grading.

233. Hunger and Food Insecurity as Public Health Issues. (4) Lecture, three hours. Designed for graduate students. Public health aspects of hunger and food insecurity in historical and international perspectives, including measurement and identification of vulnerable groups and options for relieving acute food shortage. Letter grading.

234. Obesity, Physical Activity, and Nutrition Seminar. (4) (Same as Health Policy M255.) Seminar, three hours; outside study, one hour. Designed for graduate students. Multidisciplinary introduction at graduate level to epidemiology, physiology, and current state of preventive and therapeutic interventions for obesity in adults and children, including public health and policy measures for preventing and treating obesity, and physical activity promotion. S/U or letter grading.

235. Influence of Social and Physical Environment on Racial Health Disparities. (4) Seminar, three hours. Preparation: at least one biostatistics or epidemiology course and one social science course for graduate students. Examination of how community stressors and neighborhood resources may contribute to health disparities. Discussion of multiple factors that contribute to environmental injustice and their potential solutions. Do health disparities arise because minorities and low-income populations live in harmful environments? Is relationship between environment and health disparities merely one of potential exposure to chemical/physical hazards, or are there psychosocial mechanisms at community level that act above or beyond effects of physical environment? Letter grading.

237. Evolving Paradigms of Prevention: Interventions in Early Childhood. (4) (Same as Health Policy M250.) Seminar, three hours; discussion, one hour. Requisite: Health Policy 200B. Discussion of examples of local and international efforts to improve access to healthy foods and/or limit access to unhealthy foods. Exploration of methods for addressing social causes and food-related aspects of neighborhood environments. S/U or letter grading.


239. Race, Ethnicity, and Culture as Concepts in Practice and Policy. (4) Lecture, four hours. Examination of social factors in health and illness. Bases for written critical analysis and class discussion provided through key theoretical works. Letter grading.

240. Child and Reproductive Health in Communities: Global Environmental Perspective. (4) Lecture, four hours. How policies relate to violence and development of skills to transmit this knowledge. Examination of wide range of policy topics and how each might be associated with reduction/increase in violence/violent injury. Letter grading.

244. Advanced Seminar: Medical Anthropology. (2 to 4) (Same as Anthropology M263Q, Nursing M273, and Psychiatry M273.) Seminar, three hours. Limited to 15 students. Examination of interrelationships between society, culture, ecology, health, and illness. Bases for written critical analysis and discussion. Class discussion provided through key theoretical works. S/U or letter grading.

245. HIV/AIDS and Culture in Latin America. (4) (Same as Latin American Studies M262.) Seminar, three hours. Examination of cultural, political, and public health context for people living with and at risk for HIV/AIDS and their families in Latin America. Public health aspects, including epidemiology, morbidity and mortality concerns and community interventions, medical anthropological study of experience of those individuals and grass-roots responses, as well as political/economic context addressing poverty and structural violence. Letter grading.

251. Nutritional Epidemiology I. (4) (Same as Epidemiology M234.) Lecture, two hours; discussion/lab exercise, one hour. Introduction to nutritional biostatistics and epidemiology courses. Review of all aspects of contemporary nutrition sciences that require application of epideidemiologic principles and methods, ranging from food-borne outbreak investigation to evidence-based regulatory assessment of health claims for foods. Experience in actual world of collecting, analyzing, and interpreting data related to human health and disease outcomes. S/U or letter grading.

252. Health Policy Analysis. (4) (Same as Health Policy M233.) Lecture, three hours. Requisites: Health Policy 100 or 201A, 201B, 201C. Conceptual and procedural tools for analysis of health policy, emphasizing role of analysis during various phases of lifecycle of public policy. Letter grading.

254. Intentional Disasters: War and Refugees. (2) Lecture, two hours; outside study, one hour. Requisites: courses 211A, 211B, 295, Epidemiology 100, one survey methods course. Previous international experience strongly encouraged. Overview of intentional disasters with focus on technically underdeveloped areas and consequent population movement. Principal focus on health consequences of these events and strategies to address health issues. Letter grading.

256. Interdisciplinary Response to Infectious Disease Emergencies: Public Health Perspective. (4) (Same as Medicine M256, Nursing M298, and Oral Biology M256.) Lecture, three hours; discussion, one hour. Designed to instill in professional students ideas of common emergency health problems and coordinated response, with specific attention to bioterrorism. Examination of tools to help students prevent, detect, and intervene in infectious disease emergencies. Interdisciplinary sessions also attended by students in Schools of Dentistry, Medicine, and Nursing during weeks two through five. Letter grading.

257. Program Planning in Community Disaster Preparedness. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 211A, 211B, 295. Health education and emergency management principles combined to design, plan, implement, and evaluate community disaster preparedness programs, including needs assessment, identification of target population, objective writing, program planning, and process, outcome, and impact evaluation. Letter grading.

258. Cooperative Interagency Management in Disasters. (4) Lecture, four hours. Recommended requisite: course 295. Designed for graduate students. Broad overview of how different agencies involved in
disaster responses work together to handle impact of mass population emergencies. Identification of role of local, state, and federal governments, nonprofit and private sector organizations, media, and healthcare facilities in disaster situations. Students meet with representatives of local and national organizations. Holistic approach covering politics, economics, history, geography, human rights, maternal/child health, culture. Letter grading.


M263. Social Demography of Los Angeles. (4) (Same as Sociology M263.) Lecture, three hours. Designed for graduate students. Use of city of Los Angeles to examine major social and demographic factors that characterize cities in U.S. Examination of role of these factors in affecting health outcomes. Letter grading.

M264. Latin America: Traditional Medicine, Shamanism, and Folk Illness. (4) (Same as Anthropology M233Q and Latin American Studies M264.) Lecture, three hours. Recommended preparation: course 132, bilingual English/Spanish skills. Examination of role of traditional medicine and shamanism in Latin America and exploration of how indigenous and mestizo groups diagnose and treat folk illness and Western-defined diseases with variety of health-seeking methods. Examination of art, music, and ritual and case examples of religion and healing practices in Latin America. Letter grading.

270A-270B. Foundations of Community Health Sciences. (4–4) Lecture, four hours. Enforced requisite: course 210. Course 270A is enforced requisite to 270B. Limited to doctoral students. In-depth analysis of theories, methods, and research on which community health sciences are based. Letter grading.


M272. Social Epidemiology. (4) (Same as Epidemiology M272.) Lecture, two hours; discussion, one hour. Requisite: Epidemiology 100. Relationship between sociological, cultural, and psychosocial factors in etiology of disease: distribution of morbidity and mortality. Emphasis on lifestyles and other sociocultural factors associated with general susceptibility to disease and subsequent mortality. Letter grading.


277. Advanced Community Health Education. (4) Lecture, two hours; discussion, two hours. Requisite: course 210. Before planning educational components of health program, one must assess behaviors and factors influencing health problem. Conceptual, theoretical, and evaluative skills developed and applied in constructing community-based educational program. Letter grading.

M278. Work and Health. (4) (Same as Environmental Health Sciences M270.) Lecture, three hours; practicum, one hour. Recommended preparation: graduate-level methods/statistics course, basic epidemiology. Designed for graduate students. Exploration of impact of work on physical and psychological health in context of newly emerging discipline. Focus on psychosocial models, measuring (including hands-on experience), contextual factors (gender, ethnicity, social class), and how work stressors can be ameliorated. S/U or letter grading.

281A. Capstone Seminar: Health Promotion and Education. (4) (Formerly numbered 281.) Seminar, 90 minutes; discussion, 90 minutes. Requisite: course 210. Current problems and findings in health promotion and education (e.g., nutrition, family health, AIDS/HIV, minority health); learning from presentations and critical discussions of master's project reports completed under faculty supervision. Letter grading.

281B. Capstone Seminar: Health Promotion and Education. (2) Seminar, one hour; discussion, one hour. Critical problems in health promotion and education (e.g., nutrition, family health, AIDS/HIV, minority health); learning from presentations and critical discussions of master's project reports completed under faculty supervision. Letter grading.

282. Social Marketing for Health Promotion and Communication. (4) Lecture, three hours; fieldwork, one hour. Requisite: course 210. Planning, creating, implementing, and evaluation of comprehensive health communication activities. Use of social marketing practices and strategies of audience research, marketing psychology, creative message development, brand management, comprehensive media use for disseminating health information; conducting focus group interviews, creating and evaluating effective health campaigns, critical assessment of existing campaigns. Letter grading.

283. Evidence-Based Prevention Programs for Older Adults. (4) Seminar, three hours. Requisite: course 210. Graduate seminar intended to explore sociocultural and health determinants of health-related behaviors among older adults. Letter grading.

284. Sociocultural Aspects of Mental Health. (4) Discussion, three hours. Designed for graduate students. Examination of how society shapes mental health of its members and lives of those who have been identified as mentally ill. Group differences (e.g., gender, ethnicity) in disorder and how it is socially constructed. Letter grading.

286. Doctoral Roundtable in Community Health Sciences. (4) Seminar, two hours. Designed for departmental doctoral students who must enroll every term until they are advanced to candidacy. Interactive seminar with focus on research process and social mechanics in science. May be repeated for credit. S/U grading.

M287. Politics of Health Policy. (4) (Same as Health Policy M287.) Lecture, three hours; discussion, one hour. Requisites: course 210, or Health Policy 200A and 200B. Health policy process, including effects of political structure and institutions; economic and social factors; interest groups, classes, and social movements; media and public opinion; and other factors. Letter grading.

288. Health Communication in Popular Media. (4) Lecture, three hours; fieldwork, one hour. Requisites: course 210 or prior social sciences courses. Media utilization, media effects, media content, media advocacy, media literacy, health journalism, video and audio storytelling techniques, new media, entertainment education, and transmedia. Competencies: media content analysis, writing popular nonfiction (blogs, journals), creating and evaluating effective communications using popular media. Letter grading.

290. Race, Class, Culture, and Aging. (4) Lecture, three hours; discussion, one hour. Experience of aging for African American, Latino, and Asian elderly examined in context of their families, communities, and nation. Exploration of cultural and structural influences on health and lived experiences of those elders. Letter grading.

291. Health Policy and Aged. (4) Lecture, three hours; discussion, one hour. Examination of political, economic, and social forces that shape health policy for aged, identifying failings in those policies within framework of broader health policy problems. Letter grading.

292. Information Technology for Health Promotion and Communication. (4) Lecture, three hours; field practice, one hour. Requisites: course 210 or prior social sciences courses. Health literacy, Internet use and health communication, design of health communication materials using Web authoring software, and the importance of research, publication, and presentation as part of the learning experience. Letter grading.

293. Mental and Behavioral AIDS: Roundtable Discussion. (2 to 4) Discussion, two hours; individual consultation, two hours. Review and discussion of research programs directed toward identification of psychosocial, biobehavioral, environmental, and community factors related to prevention and control of AIDS/HIV. Letter grading.

M294. Social and Behavioral Factors of HIV/AIDS: Global Perspective. (4) (Same as Psychiatry M288.) Lecture, four hours. Requisites: course 100 and Epidemiology 100, or prior social sciences courses. Overview of social and behavioral factors that influence both transmission and prevention of HIV/AIDS throughout the world. Letter grading.


296. Advanced Research Topics in Community Health Sciences. (2 to 4) Discussion, two to four hours. Advanced study and analysis of current topics in community health sciences. Discussion of current research and literature in relevant field. Letter or S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

400. Field Studies in Public Health. (4) Fieldwork, to be arranged. Field observation and studies in selected community organizations for health promotion or medical care. Students must file field placement contract with appropriate campus office, available from Student Affairs Office. May not be applied toward MS minimum course requirement; 4 units may be applied toward 60-unit minimum total required for M.P.H. degree. Letter grading.

M411. Issues in Cancer Prevention and Control. (4) (Same as Health Policy M411.) Lecture, four hours. Designed for juniors/seniors and graduate students. Introduction to causes and trends of cancer epidemic, cancer control goals for nation, and interventions designed to encourage smoking cessation/prevention, cancer screening, and other dietary, psychosocial, and lifestyle changes. Letter grading.

M420. Children with Special Healthcare Needs: Systems Perspective. (4) (Same as Health Policy M420 and Social Welfare M290L) Lecture, three hours; fieldwork, one hour. Examination and evaluation of principles, policies, programs, and practices that have evolved to identify, assess, and meet special needs of infants, children, and adolescents with developmental disabilities or chronic illness and their families. Letter grading.

427. Reproductive Health in Sub-Saharan Africa. (4) Lecture, four hours. Recommended requisite: course 247. In-depth understanding of reproductive health challenges facing sub-Saharan Africa and main policy options available to it. Course topics include family planning, STIs, abortion, adolescents, HIV/AIDS, and refugees. Letter grading.
M420. Child and Family Health Program Community Leadership Seminar. (2) (Same as Health Policy M428.) Seminar, two hours. Designed for graduate students. Examination of characteristics of community-based organizations (CBOs) and role of leadership in influencing maternal and child health programs and policies (or any population-level policies and programs). Leaders from CBOs in Los Angeles meet with students, comment on their practicum experiences, and their community leadership positions demonstrated by those CBOs. S/U or letter grading.

M430. Building Advocacy Skills: Reproductive Health Focus. (4) (Same as Health Policy M434.) Seminar, three hours. Recommended requisite: one prior health policy course such as Community Health Sciences 247 or Health Policy 235. Designed for School of Public Health graduate and doctoral students. Skills-building course to develop competency in assessing, developing, and implementing advocacy strategies for reproductive health initiatives. Introduction to legislative and community advocacy initiatives and to policymaking process, including policy analysis and development of resources necessary for legislative advocacy. Identification of advocacy goals and objectives, development of advocacy plan, coalition building, organizational capacity building, networking, and messaging development for various audiences. Students learn about range of former and current reproductive health advocacy campaigns. Letter grading.

431. Foundations of Reproductive Health. (4) Lecture, three hours. Limited to graduate students. Understanding reproductive technologies and practices is critical for public health students interested in designing programs to address problems such as unwanted pregnancy, family planning, sexually transmitted diseases, and inadequate preventive services. Examination of foundations of reproductive health from a medical perspective, with particular attention to implications for public health programs, health services, and policy. Topics include anatomy and physiology of male and female reproductive health tracts, methods of birth control, medical and surgical abortion, infertility, maternal care, and sexual violence and trauma. S/U or letter grading.


434A. Maternal and Child Health in Developing Areas. (4) Lecture, four hours. Requisite: course 231. Major health problems of mothers and children in developing areas, stress, depression, management, and prevention. Particular reference to adapting programs to limited resources in cross-cultural milieux. S/U or letter grading.

435. Seminar: Advanced Issues in Women's Health. (4) Seminar, three hours. Preparation: at least one prior women's health course, one to two biostatistics courses, one research methods course. Provides more advanced and in-depth understanding of ways in which scientists “know” and considerations of women's place in scientific discourse. Examination of series of case studies as starting point for discussion. Lec, tour, letter grading.

M436A-M436B. Child Health, Programs, and Policies. (4-4) (Same as Health Policy M449A-M449B) Lecture, four hours. Requisite: Health Policy 100. Course M436A is requisite to M436B. Examination of history of child health policy trends and determinants of health, structure, and function of health service system; needs, programs, and policies affecting especially at-risk populations. Letter grading.

440. Public Health and National Security at U.S.-Mexico Border. (4) Lecture, two hours; discussion, one hour; research and literature review, one hour. Requisite: for graduate students. Exploration of community and environmental health and health services issues that are present along U.S.-Mexico and coastal California borders. Integrated within public health framework are issues and mitigation of national security and disaster/terrorist risks and hazards. Letter grading.

441. Planning and Evaluation of Global Health Programs. (4) Lecture, four hours. Theory, guidelines, and team exercise for planning community health programs and designing projects in developing countries. Phases include community needs identification; goal setting; budget and work plan development; funding; staffing; evaluation design; data and cost analysis; and project presentation. Letter grading.

442. Anthropometric and Dietary Aspects of Nutritional Assessment. (4) Lecture, two hours; discussion, one hour; laboratory, two hours. Practical skills in anthropometric and dietary assessment, including selection of appropriate methods, data gathering and handling, and analysis and presentation. Letter grading.

444. Nutrition Education and Training: Third World Considerations. (4) Lecture, two hours; discussion, one hour; student participation, one hour. Requisite: course 434A. Problems and priorities in nutrition education and training for families and health workers in Third World communities. Emphasis on primary healthcare, mass media, communica- tions, and governmental and international interven- tions. S/U or letter grading.

447. Health and Social Context in Middle East. (4) Lecture, four hours. Recommended preparation: background in Islamic or Middle Eastern studies. Requisite: course 200 or 231 or 434A. Current health issues and problems of countries in Middle East and implications for health programs. Review of economic, demographic, and cultural variation of region to provide background for discussion of trends and patterns of health and nutritional status of popu- lation in area. Letter grading.

448. Nutrition Policies and Programs: Domestic and International Perspectives. (4) Lecture, two hours; discussion, two hours; field visits. Preparation: one nutrition or biology course and/or nutrition program experience. Nutrition programs and policies in U.S. and developing countries compared and contrasted. Analysis of role of major international, government, and private sector organizations. Emphasis on nutrition in primary healthcare, mass media, communications, and governmental and international intervention. S/U or letter grading.

449. Nutrition and Chronic Disease. (4) Lecture, four hours. Requisite: course 130 or one introductory nutrition or biology course. Advanced-level seminar on nutritional needs of healthy individuals, current knowledge of role of nutrition in disease prevention, nutritional and metabolic responses to disease, and role of nutritional therapy in management of disease. Letter grading.


452. Management of Food and Nutrition in Major Emergencies. (4) Lecture, three hours. Designed for second-year master’s or doctoral students interested in humanitarian relief. Basic principles required to design rational food and nutrition emergency relief approaches and programs. Letter grading.


456. Health Disparities, Health Equity, and Sexual Minority Populations. (4) Lecture, two hours; discussion, one hour. Limited to graduate students. Examination of health disparities affecting sexual minority populations, category that includes lesbians, gay men, bisexuals, and transgender (LGBT) persons. Use of Healthy People 2010 Companion Document for LGBT Health to outline key health issues and na- tional recommendations for key interventions in each area. Discussion of considerations for providing clinical care and public health practice in this popula- tion, unique social and contextual factors influencing LGBT health, and methodological issues for con- ducting research among LGBT persons. S/U or letter grading.

482. Practicum: Community Health Sciences. (4) Discussion, two hours; fieldwork, up to 20 hours. Requisites: courses 210, 211A, 211B. Understanding of professional practice in health-related organiza- tions. Letter grading.

484. Risk Communications. (4) Lecture, three hours; fieldwork, one hour. Requisites: courses 210, 211A, and 211B, or prior public health and behavioral sciences courses. Risk communication theory, research, and practice, including social and psychological bases of public risk perceptions, media theories, and social impact of media on health, risk communication frameworks are issues and mitigation of national security and disaster/terrorist risks and hazards. Letter grading.

485. Resource Development for Community Health Programs. (4) Lecture, three hours; fieldwork, one hour. Designed for graduate students. Overview course of fund and resource development for public health and community-based programs. Lectures and workshops include developing grant proposals, researching funding sources, evaluating proposals, developing volunteer and in-kind re- sources, and implementing capital campaigns. Letter grading.


501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate advisor and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. No more than 8 units may be applied toward master’s degree minimum total course requirement. May be repeated for credit. S/U or letter grading.

596. Directed Individual Study or Research. (2 to 12) Tutorial, to be arranged. Limited to graduate stu- dents. Individual guided studies under direct faculty supervision. Only 4 units may be applied toward M.P.H. and MS minimum total course requirement. May be repeated for credit. S/U grading.

597. Preparation for Master's Comprehensive or Doctoral Qualifying Examinations. (2 to 12) Tuto- rial, to be arranged. Limited to graduate students. May not be applied toward any degree course re- quirements. May be repeated for credit. S/U grading.
Comparative Literature

College of Letters and Science

350 Humanities Building
Box 951536
Los Angeles, CA 90095-1536
310-825-7650
uclacomplit@humnet.ucla.edu
http://www.complit.ucla.edu

Chair
Michael P. Rothberg, PhD

Professors Emeriti
Aamir R. Mufti, PhD (John Charles Hillis Professor of Literature)
David W. MacFayden, PhD
Françoise Lionnet, PhD
Tamara J. M. Levitz, PhD
Efraín Kristal, PhD
Eleanor K. Kaufman, PhD
Gil Z. Hochberg, PhD

Professors
Stephanie B. Santana, PhD
Assistant Professor
Yasemin Yildiz, PhD
Kenneth Reinhard, PhD
Associate Professors
Samuel Weber, PhD
Ross P. Shideler, PhD
Katherine C. King, PhD

Required Courses (28 units minimum):
(1) Four upper-division comparative literature courses (one course from Comparative Literature 1A through 4DW may be substituted), (2) two upper-division courses in one literature (e.g., Arabic, Chinese, English, French, German, Korean, Russian, Spanish) in the original language, and (3) one upper-division course in a second literature in the original language (one level six foreign language course may be substituted). If students complete two upper-division courses in a language other than English, they may petition to take one upper-division course taught in English translation to fulfill the third requirement.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Honors Program
The honors program is open to Comparative Literature majors with a 3.5 departmental and a 3.25 overall grade-point average. Eligible interested students should contact the undergraduate adviser to enter the program. Honors candidates must complete all requirements for the major and an honors research paper (in addition to regular course requirements) in two of the four required upper-division comparative literature courses. Candidates must also complete a fourth course in the primary literature area and Comparative Literature 198 with a core faculty member in which they write a senior honors paper of approximately 25 pages.

Comparative Literature Minor

The Comparative Literature minor offers students interested in literature and the humanities the opportunity to gain insight into the critical problems and theories addressed by comparative literature and to apply that knowledge in literature and comparative literature courses.

To enter the minor students must have fulfilled the College Writing requirement, have completed 40 units with an overall grade-point average of 2.0 or better, have taken at least one year or equivalent of a language other than English, and file a petition with either the faculty or staff undergraduate adviser, 350B Humanities Building, 310-825-7650.

Required Courses (28 units minimum):
(1) Four upper-division comparative literature courses (one course from Comparative Literature 1A through 4DW may be substituted), (2) two upper-division courses in one literature (e.g., Arabic, Chinese, English, French, German, Korean, Russian, Spanish) in the original language, and (3) one upper-division course in a second literature in the original language (one level six foreign language course may be substituted). If students complete two upper-division courses in a language other than English, they may petition to take one upper-division course taught in English translation to fulfill the third requirement.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Scope and Objectives

Standing at the forefront of innovative work in literary, theoretical, and cultural studies, comparative literature is one of the most exciting fields in the humanities. As a discipline it requires exceptional linguistic ability, theoretical knowledge, and high intellectual caliber. The UCLA program offers students the opportunity to work with faculty members in any of the University language and literature departments as well as with the Department of Comparative Literature faculty.

The department, which is interdisciplinary and multilingual in scope, is committed to continuing its pioneering work in defining new literary paradigms and fostering new directions for exploration in literary studies, including such areas as the relationship between translation and transnationalism, literary theory and emerging media, the future of national literatures in an era of globalization, gender and sexuality studies, East-West cultural encounters, human rights and global censorship, postcolonial and diaspora studies, and experimental approaches to literature and culture.

Focusing on elements that preoccupy literary studies in general, such as genre, period, theme, language, and theory, comparative literature also extends its range to questions that concern other disciplines such as anthropology, art history, film and media studies, gender studies, history, and philosophy. Courses are designed to provide students with both a historical and theoretical understanding of literary and cultural forms, themes, and movements. Given its focus on interdisciplinary research and pedagogy, comparative literature is a natural site around which to explore the boundaries of modern language and literary studies.

Undergraduate Study

Comparative Literature BA

Preparation for the Major

Required: (1) Two courses from the Comparative Literature 1, 2, or 4 series (with approval of the director of undergraduate studies, a comparable and appropriate lower-division course in another department may be substituted for one of the courses), (2) completion of the College Writing requirement, and (3) literary proficiency in at least one language other than English, to be demonstrated by admission into one upper-division literature course in the original language.

Transfer Students

Transfer applicants to the Comparative Literature major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one English composition course, two literature survey courses, at least one of which must be world literature, and the equivalent of at least one year of foreign language.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Ten courses, of which (1) five must be from comparative literature offerings, including Comparative Literature 100 and at least four additional comparative literature courses selected from M101 through 197, (2) three upper-division literature courses using original language texts in the primary language area, and (3) two upper-division literature courses using original language texts in the secondary language area (students may petition the undergraduate adviser to take two upper-division literature courses in translation if their primary literature area is in a language other than English).

598. Master’s Thesis Research. (2 to 8) Tutorial, to be arranged. Only 4 units may be applied toward M.P.H. and MS minimum total course requirement; may not be applied toward minimum graduate course requirement. May be repeated for credit. S/U grading.

599. Doctoral Dissertation Research. (2 to 12) Tutorial, to be arranged. May not be applied toward any degree course requirements. May be repeated for credit. S/U grading.
Graduate Degrees
The Department of Comparative Literature offers Master of Arts (MA), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Comparative Literature.

Comparative Literature
Lower-Division Courses

1A. World Literature: Antiquity to Middle Ages. (6) Lecture, three hours; discussion, one hour. Enforced requisite: satisfaction of Entry-Level Writing requirement. Not open for credit to students with credit for course 2AW or 4AW. Study of major texts in world literature, with emphasis on Western civilization. Texts include major works and authors such as Iliad or Odyssey; Greek tragedies, portions of Bible, Virgil, Petronius, St. Augustine, and others such as Gilgamesh or Tristan and Isolde. P/NP or letter grading.

1B. World Literature: Middle Ages to 17th Century. (5) Lecture, three hours; discussion, one hour. Enforced requisite: satisfaction of Entry-Level Writing requirement. Not open for credit to students with credit for course 2AW or 4AW. Study of a selection of works from the history of world literature, with emphasis on Western civilization as it grapples with its past and with other civilizations. Examination of works such as Dante's Divine Comedy, Cervantes' Don Quixote, Shakespeare's King Lear, and Sor Juana's Mexican poetry. P/NP or letter grading.

1C. World Literature: Age of Enlightenment to 20th Century. (5) Lecture, three hours; discussion, one hour. Enforced requisite: satisfaction of Entry-Level Writing requirement. Not open for credit to students with credit for course 2CW or 4CW. Study of major texts in world literature, with emphasis on Western civilization. Authors include Swift, Voltaire, Diderot, Rousseau, Goethe, Flaubert, Ibsen, Strindberg, Dos toovsky, Kafka, Joyce, Woolf, and Stevens. P/NP or letter grading.

1D. Great Books from World at Large. (5) Lecture, three hours; discussion, one hour. Enforced requisite: satisfaction of Entry-Level Writing requirement. Not open for credit to students with credit for course 2DW or 4DW. Study of major literary texts usually overlooked in courses that focus only on canon of Western literature. Texts from at least three of following areas read in any given term: African, Caribbean, East Asian, Latin American, and Middle Eastern literature. P/NP or letter grading.

1E. Social Media and Storytelling: Comparing Cultures. (5) Lecture, two hours; discussion, two hours. Enforced requisite: satisfaction of Entry-Level Writing requirement. Study of social media as platform for storytelling, with a focus on three distinct cultures: U.S., China, and Russia. History, form, and various functions of social media. Examination of how we tell stories about ourselves and how we interpret digital narratives we see, hear, or read from organizations near and far. Analysis of networked narratives encountered online. P/NP or letter grading.

2AW. Survey of Literature: Antiquity to Middle Ages. (6) Lecture, two hours; discussion, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 1A or 4AW. Study of major texts from the ancient Near East to the fall of Rome. Course 2AW or 4AW. Study of select texts from Antiquity to Middle Ages, with emphasis on literary analysis and expository writing. Texts include works and authors such as Odyssey, Gilgamesh, Sappho, Greek tragedies, Aeneid, Petronius, Beowulf, and Juana de Ibarbourou. P/NP or letter grading.

2BW. Survey of Literature: Middle Ages to 17th Century. (5) Lecture, two hours; discussion, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 1B or 4BW. Study of selected texts from Middle Ages to 17th century, with emphasis on literary analysis and expository writing. Texts may include works by authors such as Chaucer, Dante, Cervantes, Marguerite de Navarre, Shakespeare, Calderón, Molíère, and Racine. Satisfies Writing II requirement. Letter grading.

2CW. Survey of Literature: Age of Enlightenment to 20th Century. (5) Lecture, two hours; discussion, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 1C or 4CW. Study of select texts from Age of Enlightenment to 20th century, with emphasis on literary analysis and expository writing. Texts may include works by authors such as Swift, Voltaire, Diderot, Rousseau, Goethe, Flaubert, Ibsen, Strindberg, Dostojevsky, Kafka, James Joyce, Garcia Marquez, and James Joyce. Satisfies Writing II requirement. Letter grading.

2DW. Survey of Literature: Great Books from World at Large. (5) Lecture, two hours; discussion, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 1D or 4DW. Study of major literary texts usually overlooked in courses that focus only on canon of Western literature, with emphasis on literary analysis and expository writing. Texts from at least three of following areas read in any given term: African, Caribbean, East Asian, Latin American, and Middle Eastern literature. Satisfies Writing II requirement. Letter grading.

4AW. Literature and Writing: Antiquity to Middle Ages. (4) Lecture, four hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 1A or 4AW. Study and discussion of selected works from Antiquity to Middle Ages, with emphasis on literary analysis and expository writing. Texts include works and authors such as Iliad, Odyssey, Gilgamesh, Sappho, Greek tragedies, Aeneid, Petronius, Beowulf, and Marie de France. Satisfies Writing II requirement. Letter grading.

4BW. Literature and Writing: Middle Ages to 17th Century. (4) Lecture, four hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 1B or 4BW. Study and discussion of selected texts from Middle Ages to 17th century, with emphasis on literary analysis and expository writing. Texts may include works and authors such as Chaucer, Dante's Divine Comedy, Cervantes' Don Quixote, Shakespeare, 1001 Nights, Christine de Pizan, Popul Vuh, Molière, and Racine. Satisfies Writing II requirement. Letter grading.

4CW. Literature and Writing: Age of Enlightenment to 20th Century. (4) Lecture, two hours; discussion, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 1C or 4CW. Study and discussion of select texts from Age of Enlightenment to 20th century, with emphasis on literary analysis and expository writing. Texts may include works by authors such as Swift, Voltaire, Diderot, Rousseau, Goethe, M. Shelley, Flaubert, Ibsen, Strindberg, Dostojevsky, Gogol, Kafka, Joyce, Beckett, L. Hughes, and Garcia Marquez. Satisfies Writing II requirement. Letter grading.

4DW. Literature and Writing: Great Books from World at Large. (5) Discussion, four hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 1D or 4DW. Study and discussion of major literary texts usually overlooked in courses that focus only on canon of Western literature, with emphasis on literary analysis and expository writing. Texts from at least three of following areas read in any given term: African, Caribbean, East Asian, Latin American, and Middle Eastern literature. Satisfies Writing II requirement. Letter grading.

Upper-Division Courses

100. Introduction to Literary and Critical Theory. (5) Lecture, four hours. Preparation: satisfaction of Entry-Level Writing and College Writing requirements. Enforced requisite: two courses from Comparative Literature 1 or 2 series or English 10 series or Spanish 60 series, etc. Seminar-style introduction to discipline of comparative literature presented through series of texts illustrative of its formation and practice. Letter grading.


102. Classical Tradition: Epic. (4) Seminar, three hours. Designed for upper-division literature majors. Analysis of Iliad, Odyssey, Aeneid, Gerusalemme Liberata, and Paradise Lost both in relation to their contemporary societies and to literary traditions. Emphasis on how poets build on work of their predecessors. P/NP or letter grading.

103. People on Run: Migrants, Minorities, and Multiculturalism in Europe. (4) Seminar, three hours. Designed for upper-division literature majors. Study of migration and cultural contact in ongoing crisis of European Union. Examination of contemporary crisis of European Union and of European multiculturalism in particular. Overview of history of European integration since World War II and focused examination of ways in which culture and migration have come to dominate discussions of future of what had primarily been conceived of as one economic union. Offered in summer only. P/NP or letter grading.

C105. Comic Vision. (4) Lecture, three hours. Designed for upper-division literature majors. Literary masterpieces, both dramatic and nondramatic, selected to demonstrate varieties of comic expression. Course concurrently scheduled with course 2525. Undergraduate students read all works in translation. P/NP or letter grading.

106. Archetypal Heroes in Literature. (4) Seminar, three hours. Designed for juniors/seniors. Study and analysis of function and appearance of such archetypal heroes as Achilles, Ulysses, Prometheus, Oedipus, and Orpheus in literature from antiquity to modern period. All works read in translation. P/NP or letter grading.

108. Autobiography in Francophone and Anglophone Worlds. (5) Seminar, three hours. Designed for juniors/seniors. Focus on number of narratives that use autobiographical mode to situate self in relation to history of nations and biography of family members. Introduction to theories of subjectivity and genre of self-writing in France, Africa, and Caribbean. Comparison of serial autobiographies of Assia Djebar, Anne Ernaux, and Jamaica Kincaid to better understand limits of genre. Texts represent different limit cases of autobiography and can be read as biography, auto/ethnography, and auto/historiography. Examination of differences that emerge between autobiographical pact (Lejeune) that some authors create with their readers and liberties that others take with history. Attention to way visual culture (painting, photography, film) helps authors make their point, access memory, or create metaphors of self. P/NP or letter grading.

M110. Thousand and One Days/Allay Layla Wa Layla. (4) (Same as Arabic M110.) Lecture, three hours. Knowledge of Arabic not required. Since its appearance in Europe in 1704, Thousand and One Nights is most well-known work of Arabic literature in Western. Examination of tales commonly known as Arabian Nights, including history of its translation, contemporary oral performances of tales in Arabic-speaking world, literary emergence of vernacular language in relation to Arabic and Western appropriations of tales in music, film, and novels (Ravel, Rimsky-Korsakov, Barth, Poe, and Walt Disney). P/NP or letter grading.
111. Histories and Methodologies of Comparative Literature. (5) Seminar, three hours. Preparation: satisfaction of Entry-Level Writing and College writing requirements. Requisites: two courses from Comparative Literature 1 or 2 series or English 10 series or Spanish 60 series. Recommended: course 100. Exploration of history of comparative literature discipline and variety of central methodological past and present debates concerning nature of discipline. Introduction to theoretical and methodological texts from early 20th century to present, addressing these and other related questions: what does it mean to read comparatively? Why of reading literature across existing national and linguistic borders? What are criteria for conducting such comparative readings? Is comparative reading more concerned with finding similarities or differences? P/NP or letter grading.

M119. Al-Andalus: Literature of Islamic Spain. (4) (Same as Arabic M155.) Lecture, three hours. Study of literature of Islamic Spain to learn about interaction of Arabic and Western and Arabic and Jewish cultures and to recognize Islamic culture as vital force in European life and letters. P/NP or letter grading.

C122. Renaissance Drama. (4) Lecture, three hours. Designed for upper-division literature majors. Broad introduction to subject and types of plays in Renaissance, with consideration of historical and literary influences on plays. Readings include works of such dramatists as Tasso, Machiavelli, Lope de Vega, Racine, Jonson. May be repeated for credit with instructor and topic change. May be concurrently scheduled with course C222. Undergraduate students read all works in translation. P/NP or letter grading.

M123. Oral Literature and Performance of Arab World. (4) (Same as Arabic M123.) Lecture, three hours. Knowledge of Arabic not required. Introduction to study of living oral traditions of troubadours, storytellers, oral poets, and performers in Arabic-speaking Middle East. P/NP or letter grading.

M132. Comparative Media Studies. (4) (Same as Russian M132.) Lecture, three hours. History, form, and function of various media. Grounded in political and commercial experience of Eastern Europe, comparative investigation of media technologies, today’s burgeoning markets, and yesterday’s tragic abuses. Development of media form(s) and content across various times, places, and cultures, with special attention to Slavic phenomena. Letter grading.

M148. Contemporary Arab Film and Song. (4) (Same as Arabic M148.) Seminar, three hours. Exploration of conjunctions between contemporary Arab film and song and popular culture, and study of cinema as a forum for political and social expression. P/NP or letter grading.

C152. Symbolism and Decadence. (5) Seminar, four hours. Designed for upper-division literature majors. Study of symbolist and decadent movements in 19th- and 20th-century English and French poetry and prose, including authors such as Baudelaire, Rimbaud, Verlaine, Yeats, and Proust. May be concurrently scheduled with course C252. Undergraduate students may read all required French texts in translation. P/NP or letter grading.

C153. Post-Symbolist Poetry and Poetics. (5) Seminar, four hours. Designed for upper-division literature majors. Study of specific poets and poetic traditions to them during first half of 20th century. Texts may include poets such as W.B. Yeats, Ezra Pound, T.S. Eliot, Paul Valéry, R.M. Rilke, Gunnar Ekelöf, and Wallace Stevens. May be concurrently scheduled with course C253. Undergraduate students may read all works in translation. P/NP or letter grading.


C156. Fantastic Fictions. (4) Seminar, three hours. Designed for upper-division literature majors. Time and again in modern literature, corpuses become conduits or catalysts for revelation. What are ghosts that fiction frequently cannot put to rest, and what is their connection to national history or nation language or narrative? Readings from James Joyce, John Banville, Henry James, Toni Morrison, Adolfo Bioy Casares, Juan Carlos Onetti, Juan Rulfo, and Carlos Fuentes, with films by Alejandro Amenabar, Andrei Tarkovsky, and Kenji Mizoguchi. May be concurrently scheduled with course C256. Undergraduate students read all works in translation. P/NP or letter grading.

C160. Literature and Visual Arts. (4) Lecture, three hours. Designed for juniors/seniors. Knowledge of art history valuable but not required. Assuming that literature and visual arts are in some degree expressive of cultural and philosophical concerns of era, study of relationships between writers and movements in painting, architecture, and sculpture. Interdisciplinary investigation of similarities and differences between plastic and verbal arts in comparative study. May be repeated for credit with instructor and topic change. May be concurrently scheduled with course C260. Undergraduate students read all works in translation. P/NP or letter grading.

C161. Fiction and History. (4) Seminar, three hours. Designed for upper-division literature majors. Analysis of use of historical events, situations, and characters in literary works of Renaissance and or modern period. Texts and individual assignments range from Renaissance historical narratives (Italian humanists, Machiavelli) to 19th- and 20th-century novels by authors such as Stendhal, Verla, Thomas di Lampedusa, Carpentier, and Kundera. Use of historical fiction as a method of historical inquiry. P/NP or letter grading.

C162. Israel Seen through its Literature. (4) (Same as Jewish Studies M162.) Lecture, three hours. Attempt to impart profound understanding of Israel as seen through its literature. Examination of variety of literary texts—stories, novels, and poems—and reading of them in context of their historical backgrounds. P/NP or letter grading.

C163. Crisis of Consciousness in Modern Literature. (5) Seminar, three hours. Designed for upper-division literature majors. Study of modern European and American works that are concerned both in subject matter and types of plays in Renaissance, with consideration of historical and literary influences on plays. Other topics include new avant-gardes. Works by Marinetti, Boccioni, Picasso, Stein, Malevich, Popova, Mayakovsky, Breton, Artaud, Cocteau, Lissitzky, Warhol, Orhan. Emphasis on cross-fertilization among different kinds of aesthetic expression. P/NP or letter grading.

C155. Holocaust in Literature. (4) (Same as Jewish Studies M157.) Lecture, three hours. Investigation of how Holocaust informs variety of literary and cinematic works and raises wide range of aesthetic and moral questions. P/NP or letter grading.

C164. Modern European Novel. (5) Seminar, three hours. Designed for upper-division literature majors. Topics may include creations of otherness in modern Arab culture; East-West debate; memory, trauma, and mourning; violence, narrative, and ethics; globalization, oil, and cultural insurgency; Arab culture in translation. Genres may include prison narratives; novel of terror; memoirs by women and/or by refugees and exiles; 19th- and 20th-century travel narratives; Arabic romantic poetry; literature of pre-1948; rise of Arab novel. Areas may range from general surveys of Arab world to narrow focus on Maghreb or one country such as Algeria, Palestine, Iraq, Lebanon, or Egypt. May also be organized around Arab literary works written in one specific language, namely Egyptian Arabic, or French.

M166. Modern Jewish Literature in English: Diaspora Literature. (4) (Same as Jewish Studies M151A.) Lecture, three hours. Study of literary responses to modernity, its challenges, and the depiction of characters in English translated or from Hebrew, Yiddish, German, Russian, French, and Italian. Analysis of formal aspects of each work. P/NP or letter grading.

M167. Modern Arabic Literature in English. (4) (Same as Arabic M153.) Lecture, three hours. Designed for upper-division literature majors. Topics may include creations of otherness in modern Arab culture; East-West debate; memory, trauma, and mourning; violence, narrative, and ethics; globalization, oil, and cultural insurgency; Arab culture in translation. Genres may include prison narratives; novel of terror; memoirs by women and/or by refugees and exiles; 19th- and 20th-century travel narratives; Arabic romantic poetry; literature of pre-1948; rise of Arab novel. Areas may range from general surveys of Arab world to narrow focus on Maghreb or one country such as Algeria, Palestine, Iraq, Lebanon, or Egypt. May also be organized around Arab literary works written in one specific language, namely Egyptian Arabic, or French.

169. Continental African Authors. (4) Lecture, three hours. Requisite: course 1A, 1B, 1C, 2AW, 28W, 2CW, or English Composition 3 or 3H. Introduction to new set of African authors and attempt to discern similarities or differences they may have with major authors such as Achebe, Ngugi, Amarth, Soyinka, etc. P/NP or letter grading.

CM170. Alternate Traditions: In Search of Female Voices in Contemporary Jewish Literature. (4) (Same as Gender Studies CM170.) Seminar, three hours. Designed for upper-division literature majors. Investigation of narrative texts by contemporary French, German, English, American, Spanish, American, African, and Asian women writers from cross-cultural perspective. Common themes, problems, and techniques. Concurrently scheduled with course CM270. P/NP or letter grading.

M171. Chinese Immigrant Literature and Film. (4) (Same as Asian American Studies M130B and Chinese M153.) Lecture, three hours; discussion, one hour. Knowledge of Chinese not required. In-depth look at Chinese immigrant experience by reading literature and watching films. Theories of diaspora, gender, and race to inform thinking and discussion of relevant issues. P/NP or letter grading.

C172. Postmodern Novel. (4) Seminar, three hours. Designed for upper-division literature majors. Study of postmodern novel as it developed out of modernism. Postmodernism defined in three different ways—philosophical, scientific, and economic. Emphasis on relationship of recent novels to theories of structuralism and poststructuralism. Readings include authors such as Borges, Beckett, Nabokov, Pynchon, Fuentes, Grass, Wolf, and Calvino. Concurrently scheduled with course C227. Undergraduate students read all works in translation. P/NP or letter grading.

M175. Race, Gender, Class. (5) (Same as Asian American Studies M148.) Seminar, three hours. Theoretical and literary readings combined to explore three main aspects of social and cultural experience (race, gender, class) as separate but interconnected spheres affecting both minority and majority populations in U.S. Examination of these issues from comparative perspectives. P/NP or letter grading.


178. India Inka: Literature and Culture of Modern South. (3 to 4) Seminar, three hours. Survey of signif- icant issues in history of 20th-century Indian literature and culture. Great works of modern Indian culture such as Rabindranath Tagore, Satyajit Ray, Faiz Ahmed Faiz, and U.R. Ananth Murthy, including novels, short stories, poetry, films, and music, and works in cultural criticism and historical scholarship. Central and defining issue for 20th-century Indian culture is experience of British colonial rule and massive cul- tural and material changes that accompanied it. Ex- ploration of manner in which literature and culture have developed in interaction with powerful social forces for national independence from Britain under leaders like Mahatma Gandhi and expansion of Indian diaspora. Concurrently scheduled with course C278. P/NP or letter grading.

180. Variable Topics: Medical Humanities in Com- parative Literature. (2 to 4) Seminar, three hours. Designed for seniors/juniors. Study and discussion of defined periods and approaches in medical human- ities, giving pride of place to literary and cultural ex- pressions, literature with other disciplines such as anthropology, history, linguistics, philosophy, psychol- ogy, or sociology. Consult Schedule of Classes for topics to be offered in specific term. May be repeated for credit with topic change. P/NP or letter grading.

180SL. Variable Topics: Medical Humanities in Comparative Contexts and Community-Based Learning. (4) Seminar, three hours; fieldwork, three hours. Exploration of topics in medical humanities with community service component, giving pride of place to literary and cultural expressions with other disciplines such as art, philosophy, or sociology. Ways in which medical humanities can make contri- butions to Los Angeles community through service learning. Consult Schedule of Classes for topics to be offered in specific term. May be repeated for credit with topic change or instructor change. P/NP or letter grading.

187. Reading across Culture. (5) Seminar, three hours. What is it we do when we try to understand worlds other than our own? Do we understand something foreign to us by immersing ourselves in it or by standing apart? Does ability to understand something foreign imply taking universal standpoint? Can we make judgments about beliefs other than our own? Questions of cultural interpreta- tion have long history in both Western and non- Western cultures. Discussion of history of questions about cross-cultural interpretation and comparative interpretation of cultures in both comparative litera- ture and cultural anthropology. Reading of some very complex and influential works by such writers as Claude Lévi-Strauss, Amartya Ghosh, James Clifford, Edward Said, Gayatri Spivak, and Erich Auerbach. Concurrently scheduled with course C287. P/NP or letter grading.

190. Research Colloquia in Comparative Litera- ture. (1) Seminar, three hours. Designed for seniors/juniors. Designed to bring to- gether students undertaking supervised tutorial research in seminar setting with one or more faculty members to discuss their own work or related work in disciplines. Led by one supervising faculty member. May be repeated for credit. P/NP grading.

191. Variable Topics in Comparative Literature. (4) Seminar, three hours. Designed for seniors/juniors. Study and discussion of limited periods and special- ized issues and approaches in literary theory espe- cially in relation to other modes of discourse such as history, philosophy, psychology, linguistics, anthro- pology. Development of culminating project required. Consult Schedule of Classes for topics to be offered in specific term. May be repeated for credit with topic change. P/NP or letter grading.

197. Individual Studies in Comparative Literature. (2 to 4) Tutorial, three hours. Limited to juniors/se- niors. Individual studies in scheduled individu- als to be arranged between faculty member and stu- dent. Assigned reading and tangible evidence of mas- ter of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

198. Honors Research in Comparative Literature. (2 to 4) Tutorial, three hours. Limited to senior com- parative literature majors.Preparation: individual research and completion of honors thesis or comprehensive project on comparative topic selected by student and written under supervision of core faculty member. Students expected to meet regularly with supervisor throughout term. No more than one course may be used to fulfill four-course requirement for Compara- tive Literature majors. May be repeated once for max- imum of 8 units. Individual contract required. Letter grading.

199. Directed Research or Senior Project in Com- parative Literature. (2 to 4) Tutorial, three hours. Requisite: course 100. Limited to juniors/seniors. Su- pervised individual research or investigation under guidance of faculty mentor. Culuminating paper or project required. May be repeated for credit with con- sent of chair. Individual contract required. P/NP or letter grading.

Graduate Courses

200A. Theory of Comparative Literature. (6) Sem- inar, three hours. Study of theory of literature, with emphasis on genealogy of theoretical problems. S/U or letter grading.


202. Classical Tradition: Epic, Tragedy, or Comedy. (4) Seminar, three hours. Preparation: reading knowl- edge of Greek, Latin, or Italian. Analysis of Greek and Roman works and their re-creations in Renaissance and modern periods. Emphasis on how poets build on work of their predecessors. Reading may range from Iliad or Odyssey to tragedies by Sophocles and Euripides or satires by Aristophanes. S/U or letter grading.

205. Comic Vision. (4) Lecture, three hours. Prepa- ration: reading knowledge of one appropriate foreign literature. Literary masterpieces, both dramatic and nondramatic, selected to demonstrate varieties of comic expression. May be concurrently scheduled with course C105. Graduate students required to pre- pare papers based on texts read in original languages and to meet as group one additional hour each week. S/U or letter grading.

206. Archetypal Heroes in Literature. (4) Seminar, three hours. Preparation: reading knowledge of one appropriate foreign language. Survey and analysis of function and appearance of such archetypal heroes as Achilles, Ulysses, Prometheus, Oedipus, and Orpheus in literature from antiquity to modern period. S/U or letter grading.

210. Comparative Studies in Autobiography. (5) Seminar, three hours. Study of autobiography and its cultural and historical implications. Learning of the larger context of autobiography in literatures in the West and in the world. May be concurrently scheduled with course C156. Graduate students have additional independent study and research requirements. Grad- uate students must meet as group one additional hour each week. S/U or letter grading.

211. History of the Novel. (5 to 6) Lecture, three hours. Study of the history of the novel in its national and regional context. May be concurrently scheduled with course C152. Graduate students have additional independent study and research requirements. Grad- uate students must meet as group one additional hour each week. S/U or letter grading.

212. Post-Symbolist Poetry and Poetics. (5) Seminar, three hours. Study of specific poets and poetic movements related to them during first half of 20th century. Texts may include poets such as W.B. Yeats, Ezra Pound, T.S. Eliot, Paul Valéry, Rainer Maria Rilke, and Wallace Stevens. May be concurrently scheduled with course C153. Graduate students may meet as group one additional hour each week. S/U or letter grading.

220. Topics in Medieval Studies. (4) Seminar, four hours. Preparation: reading knowledge of one appro- priate foreign language. Examination of nature of cross-cultural, cross-linguistic, and cross-contes- sional exchange in known medieval worlds of Europe, Asia, and Africa, with focus on communication and translation. Drawing on literary, social, cultural, eco- nomic, art history, and manuscript studies to trace formation of discourses produced by diverse encour- ages from the choice of bilingual manuscript to credit with topic change. S/U or letter grading.

222. Renaissance Drama. (4) Lecture, three hours. Preparation: reading knowledge of one appropriate foreign language. Renewed production of a subject matter and types of plays in Renaissance, with con- sideration of historical and literary influences on plays. Readings include works of such dramatists as Tasso, Machiavelli, Lope de Vega, Racine, Jonson, Shake- speare. May be concurrently scheduled with course C122. Graduate students required to prepare papers based on texts read in original languages and to meet as group one additional hour each week. S/U or letter grading.

231. Latin America and the Caribbean. (3 to 4) Seminar, three hours. May be concurrently scheduled with course C156. Graduate students have additional independent study and research requirements. Grad- uate students must meet as group one additional hour each week. S/U or letter grading.

232. Symbolism and Decadence. (5) Seminar, four hours. Preparation: reading knowledge of French. Study of symbolist and decadent movements in 19th- and 20th-century English and French poetry and prose, including authors such as Baudelaire, Rim- baud, Verlaine, Mallarmé, Wilde, Yeats, and Eliot. May be concurrently scheduled with course C152. Grad- uate students required to prepare papers based on texts read in original languages and may meet as group one additional hour each week. S/U or letter grading.

253. Post-Symbolist Poetry and Poetics. (5) Seminar, four hours. Study of specific poets and poetic movements related to them during first half of 20th century. Texts may include poets such as W.B. Yeats, Ezra Pound, T.S. Eliot, Paul Valéry, Rainer Maria Rilke, and Wallace Stevens. May be concurrently scheduled with course C153. Graduate students may meet as group one additional hour each week. S/U or letter grading.

256. Fantastic Fictions. (4) Seminar, three hours. Time and again in modern literature, corpses become conduits or catalysts for revelation. What are ghosts that fiction frequently cannot put to rest, and what is their connection to national history or nation language? (4) Seminar, three hours. Preparation: reading knowledge of French. Study of symbolist and decadent movements in 19th- and 20th-century English and French poetry and prose, including authors such as Baudelaire, Rimbaud, Verlaine, Mallarmé, Wilde, Yeats, and Eliot. May be concurrently scheduled with course C152. Graduate students have additional independent study and research requirements. Grad- uate students must meet as group one additional hour each week. S/U or letter grading.

260. Literature and Visual Arts. (4) Lecture, three hours. Knowledge of art history valuable but not re- quired. Assuming that literature and visual arts are in some degree expressions of cultural and philosoph- ical patterns of eras, study of relationships between writers and movements in painting, architecture, and sculpture. Interdisciplinary investigation of similarities and differences between plastic and verbal arts in comparative study. May be concurrently scheduled with course C152. Graduate students have additional independent study and research requirements. Grad- uate students must meet as group one additional hour each week. S/U or letter grading.
260 / Comparative Literature

scheduled with course C160. Graduate students required to prepare papers based on texts read in original languages. S/U or letter grading.

261. Fiction and History. (4) Seminar, three hours. Analysis of use of historical events, situations, and characters in literary works of Renaissance and modern period. Texts and individual assignments range from Renaissance historical narratives (Italian humanists, Machiavelli) to 19th- and 20th-century novels by authors such as Stendhal, Verga, Tomasi di Lampedusa, Carpentier, and Kundera. Use of fictional methods by historians. Emphasis on how aesthetic, ideological, and political factors influence authors’ choice of historical events as subject matter. May be concurrently scheduled with course C161. Graduate students required to prepare papers based on texts read in original languages. S/U or letter grading.

262. Modern European Novel. (5) Seminar, three hours. Preparation: reading knowledge of at least one appropriate foreign language. Study of modern European and American works that are concerned both in subject matter and artistic methods with literary works of Renaissance and/or modern period. May be concurrently scheduled with course C161. Graduate students required to prepare papers based on texts read in original languages and to meet as group one additional hour each week. S/U or letter grading.

264. Comparative Arab Studies. (5) Seminar, three hours. Preparation: reading knowledge of at least one appropriate foreign language. Designed for graduate students. Investigation of politics of power, gender, and race in complex relationships between so-called First World and Third World, using both theoretical and historical approaches. S/U or letter grading.

274. Theorizing Third World. (4) Seminar, three hours. Preparation: knowledge of one appropriate foreign language. Designated for graduate students. Exploration of construction of human body through various modern technologies and discourses, including those of disease, diet, race, gender, and sexuality. Examination of texts from variety of locales, with particular emphasis on Japan. S/U or letter grading.

275. Nationalism and Immigration Today. (4) Seminar, three hours. Preparation: knowledge of one appropriate foreign language. Designed for graduate students. Study of migration to and from Europe, its impact on society and culture in their post-colonial era, with consideration of broad range of texts (aesthetic representations, theoretical reflections, and legal documents). S/U or letter grading.

276. Latin American Literature. (4) Seminar, three hours. Preparation: reading knowledge of at least one foreign language. Designed for graduate students. Investigation of politics of power, gender, and race in complex relationships between so-called First World and Third World, using both theoretical and historical approaches. S/U or letter grading.

279. Subaltern Studies: Colonial Histories and Cultural Contexts. (4) Seminar, three hours. Preparation: reading knowledge of at least one foreign language. Designed for graduate students. Exploration of construction of human body through various modern technologies and discourses, including those of disease, diet, race, gender, and sexuality. Examination of texts from variety of locales, with particular emphasis on Japan. S/U or letter grading.

280. Latin American Literature in Comparative Contexts. (4) Seminar, three hours. Preparation: reading knowledge of one foreign language. In-depth study of one topic of Latin American literature in comparative context. May be repeated for credit. S/U or letter grading.

284. Theories of Translation. (3) Seminar, three hours. Preparation: reading knowledge of one foreign language. Examination of various approaches to the concept of translation and to its significance for literary studies. Readings include authors such as Matthew Arnold, Walter Benjamin, George Steiner, and Susan Bassnett. S/U or letter grading.

285. Translation Workshop. (3) Seminar, three hours. Preparation: solid reading knowledge of at least one foreign language. Open to qualified under-graduates with proper language preparation. Introduction to problems of literary translation, particularly that, on basis of texts participating students translate, and presentation of student work for discussion. Opportunity for students to determine whether they have desire and talent to pursue literary translation as part of their professional lives, S/U or letter grading.

286. Workshop: Social Sciences Translation. (3) Seminar, three hours; tutorial. Preparation: solid reading knowledge of at least one foreign language. Designed for graduate social sciences students. Techniques students need to render scholarly texts fields from languages in their research into English and to advance their knowledge of language to stage where they can use it more effectively in all aspects of their research, as well as take advantage of translation techniques they have learned. S/U or letter grading.

287. Reading across Culture. (5) Seminar, three hours. What is it we do when we try to understand words, habits, gestures, and beliefs not our own? Do we understand something foreign to us by immersing ourselves in it or by standing apart? Does ability to understand something foreign imply taking universal standpoint? Can we make judgments about beliefs other than our own? Questions of cultural interpretation have long history in both Western and non-Western cultures. Discussion of history of questions about cross-cultural interpretation and comparative inquiry into cultures and comparative literatures and cultural anthropology. Reading of some very complex and influential works by such writers as Claude Levi-Strauss, Amitav Ghosh, James Clifford, Edward Said, Gayatri Spivak, and Erich Auerbach. Concurrently scheduled with course C187. S/U or letter grading.

288. Modern Arab Thought. (4) Same as Arabic M288. Seminar, three hours. While much has been written and said about resurgence and spread of postcolonial Islamic Islam after collapse of ideology of secular nationalism and failure of Arab left to apprehend exigencies of postrevolutionary/postcolonial moment, little has been devoted to less sensational topic of modern Arab thought despite unmistakable proliferation of critical output produced by Arab thinkers and artists in aftermath of 1967. Course addresses and re-describes this glaring imbalance by considering new cultural material—literary, critical, philosophical, artistic, and journalistic—produced before and after al-Nahda but mostly before and after al-Nahda and after al-Nahda. S/U or letter grading.

289. Theory of Film and Literature. (5) Seminar, three hours; film screening, two hours. Study of defi-nition and aims of theories of film and literature. Approaches range from socio-historical (e.g., postrevolutionary/postcolonial moments) to psychoanalytic, semiotics, transnationalism, gender theory). S/U or letter grading.
Computational and Systems Biology
Interd部artmental Program
College of Letters and Science
4436 Boelter Hall
Box 951600
Los Angeles, CA 90095-1600
310-825-7482
eolano@cs.ucla.edu
http://web.cs.ucla.edu/C&SB/

Van M. Savage, PhD, Chair
Faculty Committee
Joseph J. DiStefano III, PhD (Computer Science, Medicine)
Alan Garfinkel, PhD (Integrative Biology and Physiology)
Alexander Hoffmann, PhD (Microbiology, Immunology, and Molecular Genetics)
Tetsuya Hwasaki, PhD (Mechanical and Aerospace Engineering)
Elliot M. Landaw, MD, PhD (Biophysics)
James O. Lloyd-Smith, PhD (Ecology and Evolutionary Biology)
Matteo Pellegrini, PhD (Molecular, Cell, and Developmental Biology)
Van M. Savage, PhD (Biostatistics, Ecology and Evolutionary Biology)
Marc A. Suchard, MD, PhD (Biostatistics, Human Genetics)
Ray Wollman, PhD (Chemistry and Biochemistry, Integrative Biology and Physiology)
Xinshu Grace Xiao, PhD (Integrative Biology and Physiology)
Xia Yang, PhD (Integrative Biology and Physiology)

Scope and Objectives

The major in Computational and Systems Biology is designed primarily for highly motivated undergraduate students interested in interdisciplinary studies in life sciences, behavioral sciences, and engineering and computer sciences. Preparation for the major consists of a broad foundation in basic sciences—chemistry, biology, physics, and mathematics, plus an introduction to computing. The major itself provides students with foundations in mathematical modeling, information processing, and control and system analysis, with an emphasis on quantitative ideas and methodologies. Mathematical and other analytical skills are essential in the major.

Computational and Systems Biology majors have several options for in-depth studies: a coherent integration of courses selected from one of five designated concentrations: bioinformatics, biomedical systems, computers and biosystems, neurosystems, or systems biology. The synergy for all concentrations is integrative systems, information, and computational systems modeling sciences in biology. The focus is primarily quantitative, as mastery of advanced quantitative skills is essential for multidisciplinary understanding. Each concentration emphasizes different systems or modalities, and modeling or other computational approaches. For students interested in broad options for postgraduate studies in life sciences and related areas, including medicine, the systems biology concentration covers the widest spectrum of quantitative systems studies at all levels. The other concentrations are more focused. For example, bioinformatics is more focused on computational aspects of genetics and biology at molecular and cellular levels. Students normally select one, but because the concentrations have substantial methodological overlap, well-justified combinations are also possible.

The bioinformatics concentration is designed for students interested in computational discovery and management of biological data, primarily genomic, proteomic, or metabolomic data. Bioinformatics emphasizes computational, statistical, and other computational approaches for mining, modeling, and analyzing high-throughput biological data, and the inherent structure of biological information. Example research problems include finding statistical patterns that reveal genomic or evolutionary or developmental information, or how regulatory sequences give rise to programs of gene expression, or how the genome encodes the capabilities of the human mind.

The biomedical systems concentration is designed for students interested primarily in medical system studies, the systems aspects of biomedical, surgical, or other biomedical engineering system devices, including MEMS or nanoscale system devices, and use of dynamic biosystem modeling for optimizing or developing new clinical diagnostic or therapeutic protocols. Example research problems include feedback biocontrol system model development for imaging-based medical diagnosis and optimal control of therapeutic drug delivery.

The computers and biosystems concentration is designed for students interested primarily in computer hardware, software, data manage-
Admission
Admission to the major is by petition only and is based on successful completion of all preparation for the major courses and requirements (2.7 grade-point average in mathematics, 2.7 GPA overall, and a minimum grade of C in each preparation for the major course).

Preparation for the Major
Required: A minimum of 82 to 96 units (depending on the computer programming course and physics sequence selected), including Chemistry and Biochemistry 20A, 20B, and 20L or 14A, 14B, and 14BL; Computer Science 31 or Program in Computing 10A; Mathematics 31A, 31B, 33A, 33B, 115A; Physics 1A, 1B, and 1C, or 1AH, 1BH, and 1CH or Physics 5A, 5B, and 5C. Electrical Engineering 1 may be substituted for Physics 1C, 1CH, or 5C.

Students must also complete one of two life sciences sequences—either Life Sciences 1, 2, 3, and 4 OR 7A, 7B, and 7C. They may not substitute courses in either sequence.

Students following the bioinformatics or the computers and biosystems concentration must also complete Computer Science 32, or Program in Computing 10B or 16.

Students following the bioinformatics concentration, or biomedical systems concentration computers and biosystems concentration, or systems biology concentration must also complete Mathematics 32A.

Students are allowed to repeat up to two premajor courses. Those who do not pass a course a second time are dismissed from the program.

A recommended four-year course planner is available in the Undergraduate Advising Office in 4436 Boelter Hall.

Transfer Students
Transfer applicants to the Computational and Systems Biology major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one year of general chemistry with laboratory for majors, two years of calculus for majors, one year of calculus-based physics, one year of biology with laboratory for majors, and one programming course using C++, Python, or similar language.

Transfer applicants must meet the same academic requirements as current UCLA students, based on all courses transferred from another institution that satisfy premajor requirements, and must have completed one 12-unit term of residence in regular session at UCLA.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major
The major consists of a methodology core of six courses (23 units), a concentration of five upper-division courses (20 units minimum), and a two-course capstone research requirement (8 units). Each course in the major must be passed with a grade of C or better.

Methodology Core
Required: (1) Computational and Systems Biology M184, M185, (2) two probability and statistics courses from: Statistics 100A or Mathematics 170A or Electrical Engineering 131A and Statistics 100B or Biostatistics 100A.

Concentrations
Required: A minimum of five courses (20 to 30 units) from the concentrations listed below. No 199 course may be applied toward any concentration. An approved list of courses for each concentration is available in the program office and on the department website.

Bioinformatics (at least 20 units): Computer Science CM121, CM124, Molecular, Cell, and Developmental Biology M140 (or 144), 172 (or Physiological Science 125), and one additional course from the bioinformatics approved course list. Note: Computer Science 32, or Program in Computing 10B or 16 and Mathematics 32A are completed in the premajor.

Biomedical Systems (at least 20 units): Bioengineering CM102, CM103, Electrical Engineering 133A (or Mathematics 151A), and two additional courses from the biomedical systems approved course list. Note: Mathematics 32A is completed in the premajor.

Computers and Biosystems (at least 20 units): Bioengineering CM102 (or CM103 or Molecular, Cell, and Developmental Biology M140 or 144 or Physiological Science 166), Computer Science 170A (or Electrical Engineering 133A or Mathematics 151A), 180, and two additional courses from the computers and biosystems approved list. Note: Computer Science 32, or Program in Computing 10B and 10C and Mathematics 32A are completed in the premajor.

Neurosystems (20 units): Neuroscience M101A, M101B, 102 (or Electrical Engineering 113 or Mathematics 155), and two additional courses from the neurosystems approved list.

Systems Biology (at least 20 units): Ecology and Evolutionary Biology 170 (or Physiological Science 166), Molecular, Cell, and Developmental Biology 100 (or 114), 172 (or Physiological Science 125), and two additional courses from the systems biology approved list. Note: Mathematics 32A is completed in the premajor.

Capstone Research Requirement
Required: Computational and Systems Biology M186 to be taken in the junior or senior year and M187 to be taken in the junior or senior year after completion of course M186.

Honors Program
Students with a grade-point average of 3.5 or better in required major courses and a 3.0 cumulative GPA may apply for admission to the honors program. Honors or highest honors may be granted at the discretion of the faculty sponsor and the faculty committee to students demonstrating exceptional ability on the senior research thesis.

Mathematical Biology Minor
The Mathematical Biology minor introduces undergraduate students to an active interdisciplinary research field at UCLA. The minor core
examines biological systems in a holistic and quantitative manner by emphasizing systems and integrative principles in biology. Students who complete the minor have sufficient training to apply the knowledge they learn in graduate school or employment of their choice. Students complete a core curriculum and an elective course. The minor consists of lower-division courses basic to the minor and four core courses and one option course that provide the needed background in mathematical biology, molecular and cell biology, statistics and probability, and mathematical modeling and simulation methods for biological systems. To enter the minor, students must (1) be in good academic standing (2.0 grade-point average or better) and have completed Computer Science 31 or Program in Computing 10A with a grade of C or better, (2) submit an application essay supporting their interest in pursuing the minor and detailing any projects that they have already undertaken, and (3) file a petition in the Undergraduate Advising Office, 4436 Boelter Hall, after appropriate counseling.

**System Biology Minor**

The Systems Biology minor introduces undergraduate students to an active interdisciplinary research field at UCLA. It examines biological systems in a holistic and quantitative manner by emphasizing systems and integrative principles in biology and consists of lower-division courses basic to the minor, plus three core courses and one option course that provide the needed background in structural biology, biologic microscopy, and biochemistry. Students who complete the minor have sufficient training to apply the knowledge they learn in graduate school or employment of their choice.

To enter the minor, students must (1) be in good academic standing (2.0 grade-point average or better) and have completed Computer Science 31 or Program in Computing 10A with a grade of C or better, (2) submit an application essay supporting their interest in pursuing the minor and detailing any projects that they have already undertaken, and (3) file a petition in the Undergraduate Advising Office, 4436 Boelter Hall, after appropriate counseling.

**Computational and Systems Biology**

**Upper-Division Courses**

**M184. Introduction to Computational and Systems Biology.** (2) (Same as Bioengineering M184 and Computer Science M184.) Lecture, two hours; outside study, four hours. Enforced requisites: one course from Civil Engineering M20, Computer Science M1, Mechanical and Aerospace Engineering M20, or Program in Computing 10A, and Mathematics 3B or 31B. Survey course designed to introduce students to computational and systems modeling and computation in biology and medicine, providing motivation, flavor, culture, and cutting-edge contributions in computational biosciences and aiming for more informed basis for focused studies by students with computational and systems biology interests. Presentations by individual UCLA researchers discussing their active computational and systems biology research. P/NP grading.

**M185. Research Opportunities in Computational and Systems Biology.** (4) (Formerly numbered M185.) (Same as Computer Science M185.) Lecture, two hours; discussion, two hours. Requisites: course M184, Mathematics 32B, 33A, 33B, Life Sciences 4. Introduction to interdisciplinary laboratory research methods and research opportunities in computational and systems biology to prepare and initiate students for active engagement in research. Presentation of potential projects by faculty members and student visits to individual laboratories and participation in ongoing projects. P/NP or letter grading.

**M186. Computational Systems Biology: Modeling and Simulation of Biological Systems.** (6) (Same as Bioengineering CM186, Computer Science CM186, and Ecology and Evolutionary Biology M178.) Lecture, four hours; laboratory, three hours; outside study, eight hours. Requisites: Electrical Engineering 102, Dynamic biosystems modeling and computer simulation methods for studying biological/biomedical processes and systems at multiple levels of organization, control system, multicompartmental, predator-prey, pharmacokinetic (PK), pharmacodynamic (PD), and other structural modeling methods applied to life sciences problems at molecular, cellular (biochemical pathways/networks), organ, and organismic levels. Both theory- and data-driven modeling, with focus on translating biomodeling goals and data into mathematics models and implementing them for simulation and analysis. Basics of numerical simulation algorithms, with modeling software exercises in class and PC laboratory assignments. Letter grading.

**M187. Research Communication in Computational and Systems Biology.** (2 to 4) (Same as Bioengineering CM187 and Computer Science CM187.) Lecture, four hours; outside study, eight hours. Requisites: course M186. Closely directed, interactive, and real research experience in active quantitative systems biology research laboratory. Direct student in how to focus on topics of current interest in scientific community, appropriate to student interests and capabilities. Critique of oral presentations and written progress reports explains how to present research results. Major emphasis on effective research reporting, both oral and written. Letter grading.

**198. Honors Research in Cybernetics.** (4) Tutorial, to be arranged. Limited to juniors/seniors. Development and completion of honors thesis or comprehensive research project under direct supervision of faculty member. May be repeated for credit. Individual contract required. Letter grading.
Computer Science

Henry Samueli School of Engineering and Applied Science

4732 Boelter Hall
Box 951596
Los Angeles, CA 90095-1596
310-825-3886
http://www.cs.ucla.edu

Senior Lecturers SOE
Paul R. Eggert, PhD
Leon Levine, MS, Emeritus
David A. Smallberg, MS

Adjunct Professors
Deborah L. Estrin, PhD
David E. Heckerman, PhD
Van Jacobson, MS
Alan C. Kay, PhD
Rupak Majumdar, PhD
Peter S. Pao, PhD
Peter L. Reiher, PhD

Adjunct Associate Professor
Giovanni Pau, PhD

Adjunct Assistant Professors
Alexander Alimagayev, PhD
Carey S. Nachenberg, MS
Ramin Ramezani, PhD
Alessandro Warth, PhD

Scope and Objectives

Computer science is concerned with the design, modeling, analysis, and applications of computer systems. Its study at UCLA provides education at the undergraduate and graduate levels necessary to understand, design, implement, and use the software and hardware of digital computers and digital systems. The programs offer comprehensive and integrated studies of subjects in computer system architecture, computer networks, distributed computer systems, programming languages and software systems, information and data management, artificial intelligence, computer science theory, computational systems biology and bioinformatics, and computer vision and graphics.

The undergraduate and graduate studies and research projects in the Department of Computer Science are supported by significant computing resources. In addition to the departmental computing facility, there are over a dozen research laboratories specializing in areas such as distributed systems, multimedia computer communications, distributed sensor networks, VLSI systems, VLSI CAD, embedded and reconfigurable systems, computer graphics, bioinformatics, and artificial intelligence. Also, the Cognitive Systems Laboratory is engaged in studying computer systems that emulate or support human reasoning. The Bioinformatics Laboratory is devoted to multidisciplinary research involving the application of engineering and computer science methods to problems in biology and medicine. The BS degree may be attained either through the Computer Science and Engineering major or through the Computer Science major described below.

In addition, HSSEAS offers MS and PhD degrees in Computer Science, as well as minor fields for graduate students seeking engineering degrees. In cooperation with the John E. Anderson Graduate School of Management, the Computer Science Department offers a concurrent degree program that enables students to obtain the MS in Computer Science and the MBA (Master of Business Administration).

Undergraduate Study

The computer science and engineering program is accredited by the Computing Accreditation Commission and the Engineering Accreditation Commission of ABET. The computer science program is accredited by the Computing Accreditation Commission of ABET.

The Computer Science and Engineering and Computer Science majors are designated capstone majors. Computer Science and Engineering students complete a major product design course, while Computer Science students complete either a software engineering or a major product design course. Graduates are expected to apply the basic mathematical and scientific concepts that underlie modern computer science and engineering; design a software or digital hardware system, component, or process to meet desired needs within realistic constraints; function productively with others as part of a team; identify, formulate, and solve computer software- and hardware-related engineering problems; and demonstrate effective communication skills.

Computer Science and Engineering BS

Capstone Major

The computer science and engineering curriculum at UCLA provides students with the education and training necessary to design, implement, test, and utilize the hardware and software of digital computers and digital systems. The curriculum has components spanning both the Computer Science and Electrical Engineering Departments. Within the curriculum students study all aspects of computer systems from electronic design through logic design, MSI, LSI, and VLSI concepts and device utilization, machine language design, implementation and programming, operating system concepts, systems programming, networking fundamentals, higher-level language skills, and application of these to systems. Students are prepared for employment in a wide spectrum of high-technology industries.

Preparation for the Major

Required: Computer Science 1, 31, 32, 33, 35L, M51A; Electrical Engineering 3, 10, 11L; Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61; Physics 1A, 1B, 1C, 4AC or 4BL.

The Major

Required: Computer Science 111, 118, 131, M151B, M152A, 180, 181, Electrical Engineering 102, 110, 111L; one course from Civil and Environmental Engineering 110, Electrical Engineering 131A, Mathematics 170A, or Statistics 100A; one capstone design course (Computer Science 152B); 4 units of elective courses selected from Electrical Engineering 113, 115A, 115C, 132A, 141; 12 units of elective courses selected from Computer Science 111 through CM187 or Electrical Engineering 133A, at least one of which must be Computer Science CM121, CM122, CM124, 143, 161, or 174A; and 12 units of technical breath courses
selected from an approved list available in the Office of Academic and Student Affairs. Students who want to deepen their knowledge of electrical engineering are encouraged to select that discipline as their technical breadth area. Credit is not allowed for both Computer Science 170A and Electrical Engineering 133A unless at least one of them is applied as part of the technical breadth area. Four units of either Computer Science 194 or 199 may be applied as an elective by petition. For information on University and general education requirements, see the College and Schools chapter earlier in this catalog.

Bioinformatics Minor
The Bioinformatics minor introduces undergraduate students to the emerging interdisciplinary field of bioinformatics, an active area of research at UCLA combining elements of the computational sciences with the biological sciences. The minor organizes the many course offerings in different UCLA departments into a coherent course plan providing students with significant training in bioinformatics in addition to the training they obtain from their major. Students who complete the minor will be strong candidates for admission to Ph.D. programs in bioinformatics as well as have the relevant training to obtain jobs in the biotechnology industry.

Students complete a core curriculum and an elective course and are strongly encouraged to participate in undergraduate research as early as possible in one of the many groups offering research opportunities in bioinformatics.

To enter the minor, students must be (1) in good academic standing (2.0 grade point average or better), (2) have completed at least two of the lower-division requirements with minimum grades of C, and (3) file a petition in the Office of Academic and Student Affairs of the Henry Samueli School of Engineering and Applied Science, 6426 Boelter Hall.

Required Lower-Division Courses (14 units minimum): Computer Science 32 or Program in Computing 10C. Life Sciences 3 or 7A, 23L, Mathematics 33A.

Upper-Division Courses (18 units minimum): Computer Science 180 (or Mathematics 182), M184, two courses selected Computer Science CM121, CM122, and CM124, and one course selected from Chem- isty and Biochemistry C100, 153B, Civil and Environmental Engineering 110, Computer Science CM121, CM122, CM124, and one course selected from Chemistry and Biochemistry C100, 153B, Civil and Environmental Engineering 110, Computer Science CM121, CM122, CM124, 170A, CM186, CM187, Ecology and Evolutionary Biology 135, Electrical Engineering 102, 131A, 141, Human Genetics C144, Mathematics 170A, Microbiology, Immunology, and Molecular Genetics 132, Molecular, Cell, and Developmental Biology 144, 187AL, Physiological Science 125, Statistics 100A, 100B. Eight units of either Bioinformatics 199 or Computer Science 194 or 199 may be applied as an elective by petition.

Students are strongly encouraged to take Computer Science M184 as early as possible to obtain an overview of computational biology. If students apply any of Civil and Environmental Engineering 110, Electrical Engineering 131A, Mathematics 170A, or Statistics 100A toward major requirements or another minor, then no other course from that set may be applied toward the minor requirements.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor. All minor courses must be taken for a letter grade (unless not offered on that grading basis), and students must have a minimum grade of C in each and an overall C (2.0) grade-point average in all courses taken for the minor. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of Computer Science offers Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Computer Science. A concurrent degree program (Computer Science MS/Management MBA) is also offered.

Bioinformatics

Upper-Division Course
199. Directed Research in Bioinformatics. (2 to 4) Tutorial, six to 12 hours. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. Letter grading.

Computer Science

Lower-Division Courses
1. Freshman Computer Science Seminar. (1) Seminar, one hour discussion or one hour. Introduces department resources and principal topics and key ideas in computer science and computer engineering. Assignments given to bolster independent study and writing skills. Letter grading.


33. Introduction to Computer Organization. (5) Lecture, four hours; discussion, two hours; outside study, nine hours. Enforced requisite: course 32. Introductory course on computer architecture, as
communications and media access layers of network protocol stack. Systems include wireless LANs (IEEE802.11) and ad hoc wireless and personal area networks (e.g., Bluetooth, ZigBee). Experimental project based on mobile radio-equipped devices (smart phones, tablets, etc.) as sensor items for personal applications such as wireless health, positioning, and environment awareness, and experimental laboratory sessions included. Letter grading.

118. Peer-to-Peer Systems. (4) Lecture, four hours; discussion; two hours; outside study, six hours. Enforced requisite: courses 33, 35L. Classic concepts to analyze biological data. Focus on sequence analysis and alignment algorithms. Concurrently scheduled with course CM221. P/NP or letter grading.

CM212. Algorithms in Bioinformatics and Systems Biology. (4) (Same as Chemistry CM160B.) Lecture, four hours; discussion; two hours. Enforced requisite: course 32 or Programming in COC with grade of C– or better, and one course from Biostatics 100A, 110A, Civil Engineering 110, Electrical Engineering 110, Mathemat- ics 170A, or Statistics 100A, 110A, 110B. Enforced for engineering students as well as students from biological sciences and medical school. Introduction to bioinformatics and modeling and analysis of biological data. Letter grading.

CM214. Computational Genetics. (4) (Same as Human Genetics CM124.) Lecture, four hours; discussion; two hours; outside study, six hours. Enforced requisite: courses 33, 35L, or Programming in COC with grade of C– or better, and one course from Biostatics 100A, 110A, Civil Engineering 110, Electrical Engineering 131A, Mathematics 170A, or Statistics 100A, 110A, 110B. Enforced for engineering students as well as students from biological sciences and medical school. Introduction to computational analysis of genetic data and computational and statistical techniques to analyze biological data. Focus on sequence analysis and alignment algorithms. Concurrently scheduled with course CM221. P/NP or letter grading.

117. Computer Networks: Physical Layer. (4) (Same as Electrical Engineering EE114.) Lecture, four hours; discussion; two hours; laboratory; two hours; outside study, six hours. Not open to students with credit for course M171L. Introduction to fundamental computer communication concepts underlying and supporting modern networks, with focus on wireless

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131. Programming Languages. (4) Lecture, four hours; discussion; two hours; outside study, six hours. Enforced requisite: courses 33, 35L. Basic concepts in design and use of programming languages, including abstraction, modularity, control mechanisms, object-oriented, and functional programming languages. Letter grading.

132. Compiler Construction. (4) Lecture, four hours; discussion; two hours; outside study, six hours. Enforced requisite: courses 131, 181. Compiler structure; lexical and syntactic analysis; semantic analysis and code generation; theory of parsing. Letter grading.

133. Parallel and Distributed Computing. (4) Lecture, four hours; discussion; two hours; outside study, six hours. Enforced requisite: courses 111 (may be taken concurrently), 131. Distributed memory and shared-memory parallel programming. Corequisite: several different language paradigms, including functional, object-oriented, and logic programming. Letter grading.

C137A. Prototyping Programming Languages. (4) Lecture, four hours; discussion; two hours; outside study, six hours. Enforced requisite: course 118. Introduction to basic concepts of information security necessary for students to understand risks and mitigations associated with protection of systems and data. Topics include security models and architectures, security threats and risk analysis, access control and authentication/authorization, cryptography, network security, secure application design, and ethics and law. Letter grading.

C137B. Programming Language Design. (4) Sem- inar, four hours; outside study, eight hours. Enforced requisite: course C137A. Study of various programming language designs, their evolution, and related research literature, that attempt to address problems of software systems that are bloated, buggy, and difficult to maintain and extend. Discussion of computing toward ever higher levels of abstraction for programming. Hands-on experience designing, prototyping, and evaluating new languages, language abstractions, and/or programming environments. Concurrently scheduled with course C137B. Letter grading.

144. Web Applications. (4) Lecture, four hours; dis- cussion, two hours; outside study, six hours. Enforced require- site: course 180. Mathematics 33B. Introduction to methods for modeling and simulation using in- ternal test programs. Extensive cov- erage of methods for numeric and symbolic computa- tion, matrix algebra, statistics, floating point, optimization, and spectral analysis. Emphasis on ap- plication in simulation of physical systems. Letter grading. 170A. Mathematical Modeling and Methods for Computer Science. (4) Lecture, four hours; labora- tory, two hours; outside study, six hours. Enforced require- site: course 180. Mathematics 33B. Interpretation of analog-signaling aspects of digital systems and data communications through theory and experimental test instru- ments to generate and display signals in relevant labor- atory setups. Use of oscilloscopes, pulse and func- tion generators, baseband spectrum analyzers, devices for measuring signal-to-noise ratios, and workstations in experiments on pulse transmission impairments, waveforms and their spectra, modern and terminal characteristics, and interfaces. Letter grading. 172. Real-Time Three-Dimensional Animation. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced require- site: course 32. Introduction to handling of geometry, appearance, and motion in modern computers and devices. Emphasis on both theoretical and practical levels. Completion of one quality real-time three-dimensional animation by following through from preproduction to postproduction. End products expected to be game demonstra- tions, storytelling games, or machimazia (use of real- time graphics engines to create cinematic produc- tions). Focus on achieving high quality productions to qualify and submit products to Student Academy: Awards competition. Use of Unity Game Engine to make technical decisions to adapt stories to games. Introduction to interaction concepts, enabling stu- dents to design and produce interactive three-dimen- sional animation and to concepts in artificial intel- ligence, enabling them to refine their interactions to create high-fidelity real-time three-dimensional ani- mation. Letter grading. 174A. Introduction to Computer Graphics. (4) Lectu- re, four hours; discussion, two hours; outside study, six hours. Enforced requirement: course 32. Basic princi- ples behind modern two- and three-dimensional computer graphics systems, including complete set of steps that modern graphics pipelines use to create realistic images in real time. How to position and ma- nipulate objects in scene using geometric and computer transformations. How to create final image using per- spective and orthographic transformations. Basics of modeling primitives such as polygonal models and implicit and parametric surfaces. Basic ideas behind color spaces, illumination models, shading, and tex- ture mapping. Letter grading. 174B. Introduction to Computer Graphics: Three- Dimensional Photographic and Rendering. (4) Lectu- re, four hours; discussion, two hours; outside study, six hours. Enforced requirement: course 174A. State of art in three-dimensional photography and image- based rendering. How to use cameras and light to capture shape and appearance of real objects and scenes. Process provides simple way to acquire three-dimensional models of unparalleled detail and realism. Applications of techniques from entertain- ment to scientific research. Postprocessing of movies, generation of realistic synthetic objects and characters) to medicine (modeling of biological struc- tures from imaging data), mixed reality (augmentation of video), and security (virtual surveillance). Funda- mental analytical tools for modeling and inferring geo- metric (shape and photometric (reflectance, illumina- tion) properties of objects and scenes, and for ren- dering and manipulating novel views. Letter grading. 174C. Computer Animation. (4) Lecture, four hours; dis- cussion, two hours; outside study, six hours. Enforced require- site: course 174A. Designed for juniors/ seniors. Introduction to computer animation, in- cluding basic principles of character modeling, for- wards and inverse kinematics, collision detection, and rendering, motion capture animation techniques, physics-based animation of particles and systems, and motor control. Concurrently scheduled with course 2274C. Letter grading. 180. Introduction to Algorithms and Complexity. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced require- site: course 32. Designed for junior/senior Computer Science majors. Introduction to design and analysis of algorithms. Design techniques: divide-and-con- quering, greedy method, dynamic programming; selec- tion and priority-key encryption, key-agreement, homo- morphic encryption, private information retrieval and voting protocols, message authentication, digital sig- natures, interactive proofs, zero-knowledge proofs, secret sharing schemes, commitment proto- cols, and two-party secure computation with static security. Letter grading. 183. Introduction to Cryptography. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Preparation: knowledge of probability theory. Enforced require- site: course 180. Introduction to cryptography, computer security, and basic concepts and techniques. Topics include notions of hardness: one-way functions, hard-core bits, pseudorandom generators, pseudorandom functions and pseudo- random permutations, semantic security, public-key and private-key encryption, key-agreement, homo- morphic encryption, private information retrieval and voting protocols, message authentication, digital sig- natures, interactive proofs, zero-knowledge proofs, secret sharing schemes, commitment proto- cols, and two-party secure computation with static security. Letter grading. M184. Introduction to Computational and Systems Biology. (2) (Same as Bioengineering M164 and Computational and Systems Biology M184.) Lecture, two hours; outside study, four hours. Enforced require- site: one course from 31, Civil Engineering M20, Me- chanical and Aerospace Engineering M20, or Program in Computing 10A, and Mathematics 3B or 31B. Survey course designed to introduce students to computational and systems modeling and computa- tion in biology and medicine, providing motivation, fundamental methods and computational approaches in co- mputational biosciences and aiming for more informed basis for focused studies by students with computa- tional and systems biology interests. Presentations by individual UCLA researchers discussing their active computational and systems biology research, P/NP grading. M185. Research Opportunities in Computational and Systems Biology. (2) (Same as Computational and Systems Biology M185.) Discussion, two hours; dis- cussion, two hours. Requisites: course 184, Mathe- matics 32B, 33A, 33B, Life Sciences 4. Introduction to interdisciplinary laboratory research methods and re- search opportunities in computational and systems biology to prepare and initiate students for active en- gagement in research. Presentation of potential proj- ects by faculty members and student visits to indi- vidual laboratories and participation in ongoing proj- ects. P/NP or letter grading.
CM186. Computational Systems Biology: Modeling and Simulation of Biological Systems. (5) (Same as Bioengineering CM186, Computational and Systems Biology M186, and Ecology and Evolutionary Biology M178.) Lecture, four hours; laboratory, three hours outside study, eight hours. Conquisite: Electrical Engineering 102. Dynamic biosystems modeling and computer simulation methods for studying biological/biomedical processes and systems at multiple levels of organization. Control system, multicompartamental, predator-prey, pharmacokinetic (PK), pharmacodynamic (PD), and other structural modeling approaches applicable to life science problems in molecular, cellular (biochemical pathways/networks), organ, and organismic levels. Both theory- and data-driven modeling, with focus on translating bioinformatics and data into mathematical models. Students using them for simulation and analysis. Basics of numerical simulation algorithms, with modeling software exercises in class and PC laboratory assignments. Concurrently scheduled with course CM286. Letter grading.

CM187. Research Communication in Computational and Systems Biology. (2 to 4) (Same as Bioengineering CM187 and Computational and Systems Biology M187.) Lecture, four hours; outside study, eight hours. Requisite: course CM186. Closely directed, interactive, and real research experience in active quantitative systems biology research lab. Directed to topics of current interest in scientific community, appropriate to student interests and capabilities. Critiques of oral presentations and written progress reports explain how to proceed with further research. May be repeated for credit with topic or instructor change. Letter grading.

188. Special Courses in Computer Science. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Special topics in computer science for undergraduate students taught on experimental or temporary basis, such as those taught by resident and visiting faculty. May be repeated for credit with topic or instructor change. Letter grading.

194. Research Group Seminars: Computer Science. (4) Seminar, four hours; outside study, eight hours. Designed for undergraduate students who are part of research group. Discussion of research methods and current literature in field or of research of faculty members or students. May be repeated for credit. Letter grading.

199. Directed Research in Computer Science. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit with topic or instructor change. Letter grading.

201. Computer Science Seminar. (2) Seminar, four hours; outside study, two hours. Designed for graduate computer science students. Seminars on current research topics in computer science. May be repeated for credit. S/U or letter grading.

202. Advanced Computer Science Seminar. (4) Seminar, four hours; outside study, eight hours. Preparation: completion of major field examination in computer science. Current computer science research into theory of, analysis and synthesis of, and applications of information processing systems. Each member completes one tutorial and one or more original pieces of work in one specialized area. May be repeated for credit. S/U or letter grading.

205. Health Analytics. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 118. Focus on mastering existing core set of Internet protocols, including IP; core transport protocols, routing protocols, DNS, NTP, and security protocols such as DNSSec, to TCP understand protocols and network security principles behind design of these protocols, appreciate their design tradeoffs, and learn lessons from their operations. Letter grading.

211. Network Protocol and Systems Software Design for Wireless and Mobile Internet. (4) Lecture, four hours; outside study, eight hours. Requisite: course 118. Designed for graduate students. In-depth study of network protocol and systems software design in area of wireless and mobile Internet. Topics include (1) TCP/IP stack and protocols for wireless/mobile; (2) wireless IP addressing; (3) routing protocols; (4) security and privacy; (5) mobility management; (6) simulations and performance. Letter grading.


2123A. Embedded Systems. (4) (Same as Electrical Engineering M202A.) Lecture, four hours; outside study, eight hours. Requisite: course 111. Designed for graduate computer science and electrical engineering students. Methodologies and technologies for embedded system design. Hardware and software platforms for embedded systems, techniques for modeling and specification of system behavior, software organization, real-time operating system scheduling, real-time communication and packet scheduling, low-power battery and energy-aware system design, timing synchronization, fault tolerance and debugging, and techniques for hardware and software architecture optimization. Theoretical foundations as well as practical design methods. Letter grading.

2123B. Energy-Aware Computing and Cyber-Physical Systems. (4) (Same as Electrical Engineering M202B.) Lecture, four hours; outside study, eight hours. Requisite: course M51A or Electrical Engineering M166. Recommended: courses 111, and M151B or Electrical Engineering M116C. System-level management and cross-layer methods for power and energy consumption in computing and communication at various scales ranging across embedded, mobile, personal, enterprise, and data-center scale. Computing, networking, sensing, and control technologies and algorithms for improving energy sustainability in human-cyber-physical systems. Topics include modeling of energy consumption, energy storage, and energy generation; dynamic power management; power-performance scaling and energy proportionality; duty-cycling; power-aware scheduling; low-power systems modeling and management; thermal management; sensing of power consumption. Letter grading.

216. Network Algorithmics. (4) Lecture, four hours; outside study, eight hours. Recommended preparation: one course from Electrical Engineering 211, Introduction to algorithms or routers and servers. Models of network devices and hardware design. Principles for efficient implementation. Lookup algorithms (exact match, prefix lookups, advanced cache structures). Real-world performance, design challenges. Applied algorithms course, with focus on healthcare applications. How to properly generate and analyze health data. Project-based course to learn about best practices in health data collection and validation. Exploration of various machine learning and data analytic tools to learn underlying structure of datasets to solve healthcare problems. Different machine learning concepts and algorithms, statistical models, and building of data-driven models. Big data analytics and tools for handling structured, semistructured, and semistructured data sets. Letter grading.

217A. Internet Architecture and Protocols. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 118. Focus on mastering existing core set of Internet protocols, including IP; core transport protocols, routing protocols, DNS, NTP, and security protocols such as DNSSec, to TCP understand protocols and network security principles behind design of these protocols, appreciate their design tradeoffs, and learn lessons from their operations. Letter grading.

221. Advanced Topics in Internet Research. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 217A. Designed for graduate students. Overview of Internet development history and current networking protocols, and protocol design principles. Discussion of current Internet research topics, including latest research results in routing protocols, transport protocols, network measurements, network security protocols, and clean-slate approach to network architecture design. Fundamental issues in network protocol design and implementations. Letter grading.


219. Current Topics in Computer System Modeling Analysis. (4) Lecture, eight hours; outside study, four hours. Review of current literature in area of computer system modeling analysis in which instructor has developed special proficiency or research interests. Students report on selected topics. May be repeated for credit with consent of instructor. Letter grading.

221M. Introduction to Bioinformatics. (4) (Same as Bioinformatics M260A, Chemistry CM260A, and Human Genetics M260A.) Lecture, four hours; discussion, two hours. Enforced requisites: course 32 or Program in Computing 10C with grade of C– or better, and one course from Biostatistics 100A, 110A, Civil Engineering 110, Electrical Engineering 131A, Mathematics 170A, or Statistics 100A. Prior knowledge of biology not required. Designed for engineering students as well as students from biological sciences and medical school. Introduction to bioinformatics and methodologies, with emphasis on concepts and inventing new computational and statistical techniques to analyze biological data. Focus on sequence analysis and alignment algorithms. Concurrently scheduled with course CM121. S/U or letter grading.

222M. Algorithms in Bioinformatics and Systems Biology. (Same as Bioinformatics M224 and Computer Science M260B.) Lecture, four hours; discussion, two hours. Enforced requisites: course 32 or Program in Computing 10C with grade of C– or better, and one course from Biostatistics 100A, 110A, Civil Engineering 110, Electrical Engineering 131A, Mathematics 170A, or Statistics 100A. Course CM221 is not required. Designed for engineering students as well as students from biological sciences and medical school. Development and application of computational approaches to biological questions, with focus on formulating interdisciplinary problems as computational problems and then solving these problems using algorithmic techniques. Computational techniques include those from statistics and computer science. Concurrently scheduled with course CM122. Letter grading.

224M. Computational Genetics. (4) (Same as Bioinformatics M224 and Human Genetics CM224.) Lecture, four hours; discussion, two hours; outside study, six hours. Focus on modeling population genetics, genetic mapping, and data analysis inComputing 10C with grade of C– or better, and one course from Biostatistics 100A, 110A, Civil Engineering 110, Electrical Engineering 131A, Mathematics 170A, or Statistics 100A. Course CM221 is not required. Designed for engineering students as well as students from biological sciences and medical school. Introduction to computational analysis of genetic variation and computational methodologies to analyze large data sets. Topics include introduction to genetics, identification of genes involved in disease, inferring human population history, technologies for obtaining genetic information,
and genetic sequencing. Focus on formulating interdisciplinary problems as computational problems and then solving those problems using computational techniques from statistics and computer science. Concurrently scheduled with course CM124. Letter grading.

M225. Computational Methods in Genomics. (4) (Same as Bioinformatics M265 and Human Genetics M265.) Lecture, two and one half hours; discussion, two and one half hours; outside study, seven hours. Limited to bioinformatics, computer science, human genetics, and molecular biology graduate students. Introduction to computational approaches in bioinformatics and computational genomics. Preparation and planning for computational interdisciplinary research in genomics and genomics. Topics include genome analysis, regulatory genomics, association analysis, association study design, isolated and admixed populations, population substructure, human structural variation, model organisms, and genomic technologies. Computational techniques and methods include those from statistics and computer science. Letter grading.

M226. Machine Learning in Bioinformatics. (4) (Same as Bioinformatics M226 and Human Genetics M226.) Lecture, four hours; outside study, eight hours. Enrollment limited to 32 students. Credit no more than 10C with grade of C- or better. Recommended: one course from Biostatistics 100A, 110A, Civil Engineering 110, Electrical Engineering 131A, Mathematics 105A, 106B. Familiarity with probability, statistics, linear algebra, and algorithms expected. Designed for engineering students as well as students from biological sciences and medical schools. Biology has become data-intensive science. Bottlenecks in being able to make sense of biological processes has shifted from data generation to statistical models and inference algorithms that can analyze the data. Machine learning in bioinformatics provides important toolkit in this endeavor. Biological datasets offer new challenges to field of machine learning. Examination of statistical and computational aspects of machine learning techniques as their application to key biological questions. Letter grading.

M229S. Seminar: Current Topics in Bioinformatics. (4) (Same as Biological Chemistry M229S and Human Genetics M229S.) Seminar, four hours; outside study, eight hours. Recommended preparation for undergraduate students: prior software engineering course. Required preparation for graduate students: undergraduate-level knowledge of data structures and object-oriented program languages. As software systems have become extremely large and complex, automated software engineering analysis and development tools play important role in various software engineering tasks, such as design, construction, evolution, and testing. Debugging of software systems. Introduction to foundations, techniques, tools, and applications of automated software engineering technology. Development, extension, and evaluation of mini environments for early version of source code and assessment of how tool fits into software development process. Introduction to current research topics in automated software engineering. S/U or letter grading.

C237B. Programming Language Design. (4) Seminar, four hours; outside study, eight hours. Enforced requisite: course C237A. Study of various programming language designs, from computing history and current literature in area of computer science programming languages and in which instructor has developed special proficiency as consequence of research interests. May be repeated for credit with topic change. Letter grading.

240A. Databases and Knowledge Bases. (4) Lecture, four hours; outside study, eight hours. Requisite: course 143. Logical models for data and knowledge representations. Rule-based languages and as libraries in existing languages. Constructs, variable and context-sensitive analysis. Soundness proofs for concurrent programs. Topics include safety, liveness, program and state assertion-based techniques, weak precondition semantics, Hoare logic, temporal logic, UNITY, and axiomatic semantics for selected parallel languages. Letter grading.

241B. Pictorial and Multimedia Database Management. (4) Lecture, three and one half hours; discussion, 30 minutes; laboratory, one hour; outside study, seven hours. Requisite: course 143. Multimedia data: alphanumeric, long text, images/pictures, video, and voice. Multimedia information systems requirements. Data models, Searching and accessing databases and across Internet by alphanumeric, image, video, and audio content. Querying multimedia languages and communication. Database design and organization, logical and physical. Indexing methods. Internet multimedia streaming. Other topics at discretion of instructor. Letter grading.


C237B. Programming Language Design. (4) Seminar, four hours; outside study, eight hours. Enforced requisite: course C237A. Study of various programming language designs, from computing history and current literature in area of computer science programming languages and in which instructor has developed special proficiency as consequence of research interests. May be repeated for credit with topic change. Letter grading.
270 / Computer Science

249. Current Topics in Data Structures. (2 to 12) Lecture, four hours; outside study, eight hours. Review of current literature in area of data structures in which instructor has developed special proficiency as consequence of research interests. Students report on selected topics. May be repeated for credit with consent of instructor. Letter grading.


251B. Parallel Computer Architectures. (4) Lecture, four hours; outside study, eight hours. Requisite: course M151B. Recommended: course 251A. Design and implementation of high-performance systems, advanced memory hierarchy techniques, static and dynamic pipelining, superscalar and VLIW processors, branch prediction, speculative execution, software support for instruction-level parallelism, simulation-based performance analysis and evaluation, state-of-art design examples, introduction to parallel architectures. Letter grading.

252A. Arithmetic Algorithms and Processors. (4) Lecture, four hours; outside study, eight hours. Requisite: course M151B. Recommended: course 251A. STATE-OF-ART SCIENTIFIC COMPUTING. Number representations in computer systems, high-performance building blocks, such as chip multiprocessors (CMPs). Operating systems, memory management, microarchitectures for exploiting parallelism at multiple levels. Current research areas. Examples of chips and systems. Letter grading.

2526A. Design of VLSI Circuits and Systems. (4) Same as Electrical Engineering M216A.) Lecture, four hours; discussion, two hours; laboratory, four hours; outside study, two hours. Requisites: course M51A or Electrical Engineering M151A. Recommended: Electrical Engineering 115A. Lecture, four hours; outside study, eight hours. Requisite: one graduate probability or statistics course such as course 262A, Statistics 200B, or 202B. Review of Bayesian networks, causal networks, and conditional independence. Learning causal structures from data. Identifying causal effects. Covariate selection and instrumental variables in linear and non-linear models. Asymmetric and confounding control. Logic and algorithmization of counterfactuals. Probabilities of counterfactuals. Direct and indirect effects. Probabilities of causation. Identification and causal diagrams. Lecture grading.

262Z. Current Topics in Causal Modeling. (4) Lecture, four hours; outside study, eight hours. Requisite: one graduate probability or statistics course such as course 262A, Statistics 200B, or 202B. Review of Bayesian systems, causal Bayesian networks, and causal Bayesian inference using belief networks representation. Letter grading.

262C. Current Topics in Causal Modeling, Inference, and Reasoning. (4) (Same as Statistics M241.) Lecture, four hours; outside study, eight hours. Requisite: one graduate probability or statistics course such as course 262A, Statistics 200B, or 202B. Review of Bayesian networks, causal Bayesian networks, and causal Bayesian inference using belief networks representation. Lecture grading.

2626. Current Topics in Causal Modeling, Inference, and Reasoning. (4) (Same as Statistics M241.) Lecture, four hours; outside study, eight hours. Requisite: one graduate probability or statistics course such as course 262A, Statistics 200B, or 202B. Review of Bayesian networks, causal Bayesian networks, and causal Bayesian inference using belief networks representation. Letter grading.

270G. Logic Synthesis of Digital Systems. (4) Lecture, four hours; outside study, eight hours. Requisites: courses M51A, 180. Review of logic theory with a focus on digital design automation issues. Current research areas. Students report on selected topics. May be repeated for credit with consent of instructor. Letter grading.

258H. Analysis and Design of High-Speed VLSI Interconnects. (4) Lecture, four hours; outside study, eight hours. Review of current literature in area of computer science design system design in which instructor has developed special proficiency as consequence of research interests. Students report on selected topics. May be repeated for credit with topic change. Letter grading.

260. Machine Learning Algorithms. (4) Lecture, four hours; outside study, six hours. Requisites: course M258A, 258F. Introduction to machine learning allows computers to learn potentially complex patterns from data and to make decisions based on these patterns. Introduction to fundamentals of this discipline to provide both conceptual grounding and practical experience with several learning algorithms. Experiments and examples in areas such as healthcare, financial systems, commerce, and social networking. Letter grading.

261A. Problem Solving and Search. (4) Lecture, four hours; outside study, eight hours. Requisite: course 180. Problems of identifying patterns in data. Machine learning allows computers to learn potentially complex patterns from data and to make decisions based on these patterns. Introduction to fundamentals of this discipline to provide both conceptual grounding and practical experience with several learning algorithms. Experiments and examples in areas such as healthcare, financial systems, commerce, and social networking. Letter grading.

263A. Language and Thought. (4) Lecture, four hours; outside study, eight hours. Requisite: course 130 or 131 or 161. Introduction to natural language processing (NLP), with emphasis on semantics. Presentation of process models for variety of tasks, including question answering, paraphrasing, machine translation, word-sense disambiguation, narrative and editorial comprehension. Examination of both symbolic and statistical approaches to language processing and acquisition. Letter grading.

263C. Animats-Based Modeling. (4) Lecture, four hours; outside study, eight hours. Requisite: course 130 or 131 or 161. Animats are mobile/sensing animal-inspired software agents designed and deployed in dynamic environments. Emphasis on modeling: goal-oriented behavior via neurocontrollers, adaptation via reinforcement learning, evolutionary programming. Animats-based tasks include foraging, mate finding, predation, navigation, predator avoidance, cooperative nest construction, communication, and parenting. Letter grading.

264A. Automated Reasoning: Theory and Applications. (4) Lecture, four hours; laboratory, four hours; outside study, four hours. Requisite: course 161. Introduction to the theory and practice of automated reasoning using propositional and first-order logic. Topics include syntax and semantics, resolution, sequent calculus and natural deduction algorithms for logical reasoning, including satisfiability and entailment; syntactic and semantic restrictions on knowledge bases; effect of these restrictions on expressivity, completeness, computability, and tractability; applications of automated reasoning to diagnosis, planning, design, formal verification, and reliability analysis. Letter grading.

265A. Machine Learning. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 258A, 258F. Introduction to machine learning. Learning by analogy, inductive learning, learning creativity, learning by experience, role of episodic memory organization, and managing uncertainty in reasoning systems; presentation of unifying algorithms for these models; presentation of unifying statistical models for modeling visual patterns: decision trees, neural networks, support vector machines, and stochastic algorithms for learning. S/U or letter grading.

266A. Statistical Modeling and Learning in Vision and Cognition. (4) (Same as Statistics M232B.) Lecture, four hours; outside study, eight hours. Requisites: courses 258A, 258F. Introduction to broad range of algorithms for statistical inference and learning that could be used in vision, pattern recognition, speech, bioinformatics, data mining. Topics include Markov chain Monte Carlo computing, sequential Monte Carlo methods, belief propagation, partial differential equations. S/U or letter grading.

266B. Statistical Computing and Inference in Vision and Cognition. (4) (Same as Statistics M232B.) Lecture, four hours; outside study, eight hours. Requisites: courses 258A, 258F. Introduction to broad range of algorithms for statistical inference and learning that could be used in vision, pattern recognition, speech, bioinformatics, data mining. Topics include Markov chain Monte Carlo computing, sequential Monte Carlo methods, belief propagation, partial differential equations. S/U or letter grading.

268. Seminar: Computational Neuroscience. (2) Seminar, two hours; outside study, four hours. Designated for students undertaking thesis research. Discussion of advanced topics and current research in computational neuroscience. Neural networks and connectionism as paradigm for parallel and concurrent computation in application to problems of perception, thinking, memory, intelligence, and robotics. May be repeated for credit. S/U grading.
C274C. Computer Animation. (4) Lecture, four hours; discussion, two hours; outside study, six hours. En- rentedly scheduled with course C174C. Letter grading.

M270A. Cryptography. (4) Same as Mathematics M205A.) Lecture, four hours; outside study, eight hours. Introduction to theory of cryptography, stressing rigorous definitions and proofs of security. Topics include notions of hardness, one-way func- tions, pseudorandomness, one-time pad, pseudorandom generators, pseudorandom functions and pseudorandom permu- tations, semantic security, public-key and private-key encryption, secret-sharing, message authentication, digital signatures, semantic security, zero-knowledge proofs, collision-resistant hash functions, commit- ment protocols, key-agreement, contract signing, and two-party secure computation with static security. Letter grading.

M282B. Cryptographic Protocols. (4) (Same as Mathematics M209B.) Lecture, four hours; outside study, eight hours. Requisite: course M282A. Consid- eration of advanced cryptographic protocol design and analysis. Topics include noninteractive zero- knowledge proofs; zero-knowledge arguments; con- current and non-black-box zero-knowledge; IP=PSPACE; interactive notions of security for public-key encryption including chosen-ciphertext security; secure multiparty computation; dealing with dynamic adversary; nonmalleability and compos- ability of secret storage protocols; threshold cryptography; identity-based cryptog- raphy; private information retrieval; protection against man-in-middle attacks; voting protocols; identification protocols; lower bounds on use of cryptographic primitives, software obfuscation. May be repeated for credit with topic change. Letter grading.

289A-289ZZ. Current Topics in Computer Theory. (2 to 12 each) Lecture, four hours; outside study, eight hours. Review of current literature in area of computer theory in which instructor has developed special proficiency as consequence of research inter- ests. Students report on selected topics. Letter grading.

289CO. Complexity Theory. (4) Lecture, four hours; outside study, eight hours. Diagonalization, polynomial-time hierarchy, PCP theorem, randomness and de-randomization, circuit complexity, attempts and limitations to proving P does not equal NP, average- case complexity, one-way functions, hardness amplifi- cation, problem sets for previous and original research related to course topics. Letter grading.

289OA. Online Algorithms. (4) Lecture, four hours; outside study, eight hours. Requisite: course 180. In- troduction to decision making under uncertainty and competitive analysis. Review of current research in online algorithms for problems arising in many areas, such as data and memory management, searching and navigating in unknown terrains, and server sys- tems. Letter grading.

M270B. Complexity Theory. (4) Lecture, four hours; discussion, two hours; outside study, eight hours. Letter grading.

M282A. Cryptography. (4) Same as Mathematics M205A.) Lecture, four hours; outside study, eight hours. Introduction to theory of cryptography, stressing rigorous definitions and proofs of security. Topics include notions of hardness, one-way func- tions, pseudorandomness, one-time pad, pseudorandom generators, pseudorandom functions and pseudorandom permu- tations, semantic security, public-key and private-key encryption, secret-sharing, message authentication, digital signatures, semantic security, zero-knowledge proofs, collision-resistant hash functions, commit- ment protocols, key-agreement, contract signing, and two-party secure computation with static security. Letter grading.


M284A-284ZZ. Topics in Automata and Languages. (4 each) Lecture, four hours; outside study, eight hours. Requisite: course 181. Additional requisites for each offering announced in advance by department. Selections from families of formal languages, gram- mas, machines, operators; pushdown automata, context-free languages and their generalizations, parsing; multidimensional grammars, developmental systems, and methods of current sections. Principles of Design and Analysis (280A); Distributed Algorithms (280D); Graphs and Networks (280G). May be re- peated for credit with consent of instructor and topic change. Letter grading.

CM286. Computational Systems Biology: Model- ing and Simulation of Biological Systems. (5) (Same as Bioengineering CM286.) Lecture, four hours; laboratory, three hours; outside study, eight hours. Corequisite: Electrical Engineering 102. Dy- namic biosystems modeling and computer simulation methods for studying biological/biomedical pro- cesses and systems at multiple levels of organization, Control system, multicompartamental, predator-prey, pharmacokinetic (PK), pharmacodynamic (PD), and other structural modeling methods applied to life sci- ences problems. Topics such as (biomedical pathways/networks), organ, and organismic levels. Both theory and data-driven modeling, with focus on translating biomodeling goals and data into mathe- matics models and implementing them for simulation and analysis. Basics of numerical simulation algo- rithms, with modeling software exercises in class and PC laboratory assignments. Concurrently scheduled with course CM287. Letter grading.

CM287. Research Communication in Computa- tional and Systems Biology. (2 to 4) (Same as Bio- engineering CM287.) Lecture, four hours; outside study, eight hours. Requisite: course CM286. Closely directed, individual research experience in active quantitative systems biology research labora- tory. Direction on how to focus on topics of current in- terest in scientific community, appropriate to student interests and capabilities. Critiques of oral presenta- tions and written progress reports explain how to pro- ceed with search for research results. Major emphasis on effective reporting research, both oral and written. Concurrently scheduled with course CM187. Letter grading.

M296A. Advanced Modeling Methodology for Dy- namic Biomedical Systems. (4) (Same as Bioengi- neering M296A and Medicine M270C.) Lecture, four hours; outside study, eight hours. Requisite: Electrical Engineering 141 or 142 or Mathematics 115A or Me- chanical and Aerospace Engineering 171A. Develop- ment of dynamic systems modeling methodology for physiological, biomedical, pharmacological, chem- ical, and related systems. Control system, multicom- partamental, noncompartmental, and input/output models, linear and nonlinear. Emphasis on model ap- plications, limitations, and relevance in biomedical sciences and other limited data environments. Problem solving in PC laboratory. Letter grading.

M296B. Optimal Parameter Estimation and Exper- imental Design for Biomedical Systems. (4) (Same as Bioengineering M296B, Biomedical Engineering M270, and Medicine M270C.) Lecture, four hours; outside study, eight hours. Requisite: course CM286 or M296A or Biomedical Engineering 220. Optimal methods for biomedical modeling and model parameter estimation algorithms for fitting dy- namic system models to biomedical data. Model dis- crimination methods. Theory and algorithms for de- signing optimal experimental or developing and quar- tering models, with special focus on optimal sampling schedule design for kinetic models. Exploration of PC software for model building and optimal experiment design via applications in physiology and pharma- cology. Letter grading.

M296C. Advanced Topics and Research in Bio- medical Systems Modeling and Computing. (4) (Same as Bioengineering M296C and Medicine M270C.) Lecture, four hours; outside study, eight hours. Requisite: course CM296B. Research tech- niques and experience on special topics involving models, modeling methods, and model/computing in biological and medical sciences. Review and critique
Computing, Program in

See Mathematics

Conservation of Archaeological and Ethnographic Materials

Interdepartmental Program

College of Letters and Science

A210 Fowler Building
Box 951510
Los Angeles, CA 90095-1510

310-825-9407
mswanson@ioa.ucla.edu
http://conservation.ucla.edu

Joanna Kakkouli, DPhil, Chair

Faculty Committee
Christian J.M. Fischer, PhD (Cotsen Institute of Archaeology)
T. Mark Harrison, PhD (Earth, Planetary, and Space Sciences)
H. Pirouz Kavehpour, PhD (Materials Science and Engineering)
Peter B. Lutenfeld, PhD (Design/Media Arts)
John K. Papadopoulos, PhD (Classics)
Ellen J. Pearlstein, MA (Information Studies)
Lothar von Falkenhagen, PhD (Art History)
Willeke Z. Wendrich, PhD (Near Eastern Languages and Cultures)

Scope and Objectives

The UCLA/Getty Conservation interdepartmental program provides an excellent platform for education and research in the conservation of material culture. It supports discovery and innovation through research that transcends the boundaries of traditional disciplines. It uniquely trains cultural property professionals in the best practices and methods of cultural heritage conservation through various pedagogical approaches including, but not limited to, core teaching and learning, independent research, and laboratory experience in museums and the field. Finally, it positively impacts the community by engaging with a more informed public that would seek to protect cultural heritage from imminent threats.

The program offers two degree options: a practice-focused three-year MA degree in Conservation of Archaeological and Ethnographic Materials and a research-focused PhD degree in Conservation of Material Culture. Though the two degrees share a scholarly approach to the discipline and strong commitment to the advancement of the conservation profession, they provide distinctive competencies, preparing students for different careers in the cultural heritage section and beyond.

The aim of the program is to train the next generation of multidisciplinary researchers, heritage practitioners, and cross-cultural leaders in the theoretical and experimental developments and policy of conservation and sustainable preservation of material culture. Through this training, graduates will bring innovative, cutting-edge methods and holistic approaches to the conservation profession. More specifically, these degree programs aim to provide students with integrated, comprehensive curricula to foster the next generation of conservation professionals and leaders with strong research, theoretical, and applied qualitative and quantitative skills; rigorous training in conservation theory, praxis, ethics, policy, and research; substantive research training in a specific domain of application in conservation; and experiential learning and mentoring in communication, scientific writing skills, and the ability to work in multidisciplinary teams.

The objectives of the program are to provide students with a solid educational base and practical training in the conservation of both archaeological and ethnographic materials, as well as an appreciation of the often complex issues related to significance, access, and use of these materials that can be very different from the criteria for conservation of fine art or historical materials. The special focus of the program and its interdisciplinary curriculum serves the archaeological, scientific, native, and cultural minority communities alike and offers a nexus at the boundaries of conservation, archaeology, ethnography, the natural sciences, and engineering.

The partnership between UCLA and the Getty in establishing the program ensures that both a major research university and an institution with a principal mandate for conservation of world cultural heritage are working to create rich and vibrant conservation training opportunities. The program helps students develop working relationships with a wide array of colleagues in the Getty Conservation Institute, the J. Paul Getty Museum, other local museums and cultural organizations, and different departments and programs at UCLA.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Conservation of Archaeological and Ethnographic Materials Program offers a Master of Arts (MA) degree in Conservation of Archaeological and Ethnographic Materials, and Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Conservation of Material Culture.
Conservation of Archaeological and Ethnographic Materials

Upper-Division Courses

C210. Field Methods in Archaeological Conservation: Readiness, Response, and Recovery. (4) Laboratory, four hours; laboratory, two hours; laboratory, two hours. Basic and advanced techniques on digital photography, photogrammetry, and scientific imaging to determine and document condition (defects) and technological features of archaeological and ethnographic materials. Development of basic theoretical imaging and photographic techniques and scientific imaging to determine and document condition (defects) and technological features of conservation materials and their aging characteristics. Science and application methods of traditional organic and inorganic systems and introduction of digital techniques based on imaging (optical, electron microscopy, X-ray and electron spectroscopy, X-ray diffraction, infrared spectroscopy, reflectance spectroscopy, multispectral imaging) and modern imaging techniques. Letter grading.

M215. Cultural Materials Science I: Analytical Imaging and Documentation in Conservation of Materials. (4) Formerly numbered 215. (Same as Materials Science M213.) Lecture, two hours; laboratory, two hours; laboratory, two hours. Basic and advanced techniques on digital photography, photogrammetry, and scientific imaging to determine and document condition (defects) and technological features of conservation materials and their aging characteristics. Science and application methods of traditional organic and inorganic systems and introduction of digital techniques based on imaging (optical, electron microscopy, X-ray and electron spectroscopy, X-ray diffraction, infrared spectroscopy, reflectance spectroscopy, multispectral imaging) and modern imaging techniques. Letter grading.


C220. Field Methods in Archaeological Conservation: Readiness, Response, and Recovery. (4) Laboratory, four hours. Overview of risks (direct and indirect) and threats from natural disasters, urban development, socioeconomic growth, and global warming, conflicts, and neglect. Consideration of significance and value of heritage sites and role of stakeholders. Investigation of methods of evaluation of physical condition and development of risk assessment, including physical risk of materials, threats to site preservation management, including visitors’ organization, urban development, socioeconomic growth, and tourist development. Letter grading.


C232. Conservation Laboratory: Organic Materials I. (4) Laboratory, four hours. Enforced requisite: course 262. Recommended for graduate conservation students. How to recognize characteristic deterioration problems found in organic materials from archaeological and ethnographic contexts and introduction to typical treatments used historically and currently for these materials. Letter grading.


C234. Conservation Laboratory: Metals II. (4) Laboratory, four hours. Enforced requisite: course 264. Recommended for graduate conservation students. Hands-on work to study deterioration and conservation of metallic artifacts and composite objects containing metals (copper and copper alloys, and silver), Corrosion of ancient metals and their deterioration processes, conservation, problems in stability, issues with composite objects, their deterioration and preservation, cleaning, joining, and gap-filling. Letter grading.

M240. Environmental Protection of Collections for Museums, Libraries, and Archives. (4) (Same as Information Studies M238.) Lecture, two hours; laboratory, two hours. Enforced requisite: course 234, 263. Recommended for graduate conservation students. Hands-on work to study deterioration and conservation of metallic artifacts and composite objects containing metals (copper and copper alloys, and silver), Corrosion of ancient metals and their deterioration processes, conservation, problems in stability, issues with composite objects, their deterioration and preservation, cleaning, joining, and gap-filling. Letter grading.


Graduate Courses


M211L. Cultural Materials Science Laboratory: Technical Study. (4) (Formerly: numbered 210L) (Same as Materials Science CM212 or C112.) Research-based laboratory through object-based problem-solving approach in conservation materials science. Experimental techniques, characterization, and analysis of archaeological and ethnographic materials (using materials science principles and reverse engineering processes) to determine technological features, defects, and products of alteration. Hands-on experience with noninvasive imaging and spectroscopic techniques, sampling and sample preparation methods, analysis of microsamples. Letter grading.

211. Science Fundamentals in Conservation of Materials. (4) Lecture, 3 hours; laboratory, 1 hour. Introduction to important scientific parameters in conservation of materials that are of great importance for both fundamental science and practical applications. Students gain knowledge of intrinsic properties of materials, mechanisms of deterioration, and conser- vation treatments. General chemistry, physics, and physical chemistry (atomic structure bonding, etc.), fluid transfers in porous materials, diffusion, interfaces, surface tension, wetting, adsorption, disso- lution and crystallization, mechanical properties (properties/characterization), phase transformations (glass, metals, polymers). Letter grading.

212. Conservation and Ethnography. (4) Laboratory, four hours. Designed for graduate conservation stu- dents. Introduction to work as conservators with in- digenous repositories housing cultural collections. Students learn different models for tribal museums and cultural centers, and importance of material se- lection, and properties in baskets they are treating. Letter grading.

213. Conservation, Response, and Practice. (4) Lecture, three hours; activity, one hour. Introduction to preservation students. How to recognize characteristic deterioration problems found in organic materials from archaeological and ethnographic contexts and introduction to typical treatments used historically and currently for these materials. Letter grading.
C242. Managing Collections for Museums, Libraries, and Archives. (4) Lecture; two hours; activity, two hours. Designed for graduate conservation students. How conservators work together with curators, collections managers, mount makers, designers, and registrars to permit collections to be both accessed and preserved. Concurrently scheduled with course C142. Letter grading.


260. Structure, Properties, and Deterioration of Materials: Ceramics, Glass, Glazes. (2) Lecture, three hours. General introduction to different types of ancient ceramic and glass materials. Relationship between composition (chemistry), structure (crystals, molecular arrangement, and microstructure), and properties of ceramics, glass, glazes. Nature of fracture and failure deterioration explained using basic concepts from physics and chemistry. Chemical, optical, and structural properties. Deterioration phenomena, defects, and alteration products; relationship between composition (chemistry), structure (crystals, molecular arrangement, and microstructure), and properties explained using basic concepts from physics and chemistry. Intrinsic attributes and resistance to weathering. Causes, sources, and mechanisms of deterioration (physical, chemical, and biochemical). Letter grading.

265. Structure, Properties, and Deterioration of Materials: Organic II. (2) Lecture, one hour; laboratory, one hour. General introduction to plant-based organic materials used to produce ethnographic and archaeological cultural heritage: wood, bark, paper, bast fibers, grasses. Relationship between materials, processing, and properties of natural materials using basic concepts from biology and chemistry. Structural stability and deterioration phenomena of these materials as found in cultural collections. Letter grading.

286. Special Topics in Conservation. (2 or 4) Lecture, three hours; laboratory, one hour. Special topics in theoretical and practical subjects in conservation such as focused materials studies, new conservation approaches, advanced scientific applications, or current special work by core program faculty or visiting scholars. If appropriate, field trips may be arranged. May be repeated for credit with topic or instructor change. Letter grading.

486. Conservation Program Internship. (6 or 12) Fieldwork, 20 or 40 hours. Open only to Conservation MA program graduate students who have completed first year of conservation program coursework. Supervised conservation-related professional and research-based training in field through participation in field projects, conferences, and seminars; laboratory, one hour. Letters of recommendation from participating School of Dentistry faculty members. S/U grading.

596. Directed Individual Studies. (2 to 8) Tutorial, seven hours. Limited to graduate conservation students. Individual guided studies that may include conservation-related projects or professional development. Projects carried out at Villa laboratories or at local collection or analytical facility. To be arranged with program faculty members, and supervision may be shared between faculty members and outside specialists. Letter grading.

598. MA Thesis Preparation. (2 to 12) Tutorial, two hours; laboratory, one hour. Development of research paper on conservation topic or treatment-based investigation that can be theoretical in scope or practically oriented. Letter grading.

Scope and Objectives

The UCLA School of Dentistry offers the following courses for general campus students. Dentistry 199 and 199H are individual special studies courses for UCLA undergraduates with definitive research interests and abilities applicable to dentistry. The subject areas include oral biology, clinical research, and dental health policy. Interested students should contact the associate dean of research at 310-825-6401 to obtain the names and areas of interest of participating School of Dentistry faculty members.

Dentistry

Upper-Division Courses

199. Individual Special Studies. (2 to 8) Tutorial, to be arranged. Studies in dentistry and related subject areas appropriate for training of particular students, with required reading assignments or laboratory work leading to final oral or written examination. May be repeated for maximum of 16 units. P/NP or letter grading.

199H. Individual Special Studies (Honors). (2 to 8) Tutorial, to be arranged. Studies in dentistry and related subject areas appropriate for training of particular students, with required paper submitted at end of course in addition to final examination (paper to be of publication quality as judged by course mentor). May be taken for maximum of 8 units. P/NP or letter grading.

Graduate Courses


441C. Introduction to Healthcare. (2) Lecture, two hours. Description and analysis of American dental care system from historical, ethical, and legal perspectives. Assessment of how dentistry fits within general provision of healthcare services in America, with comparisons to dental care provisions in other countries. S/U grading.

DANCE

See World Arts and Cultures/Dance

DENTISTRY

School of Dentistry

A0-111 Dentistry

Box 951762

Los Angeles, CA 90095-1762

310-825-9789

https://www.dentistry.ucla.edu

Paul H. Krebsbach, DDS, PhD, Dean

Design | Media Arts

School of the Arts and Architecture

2275 Broad Art Center

Box 951456

Los Angeles, CA 90095-1456

310-825-9007

dmainfo@arts.ucla.edu

http://dama.ucla.edu

Christian A. Moeller, Dipl–ING, Chair

Professors

Rebecca Allen, MS

Johanna R. Drucker, PhD (Martin and Bernard Breslauer Professor of Bibliography)

Erkki I. Huhtamo, PhD

Willem Henri Lucas, BA

Peter B. Lunenfeld, PhD

Rebecca Mendez, MFA

Christian A. Moeller, Dipl–ING
The Department of Design|Media Arts offers the Bachelor of Arts and Master of Fine Arts degrees. The BA degree focuses on visual and practical application, and contemporary thought with historical perspective. The undergraduate program begins with the study of basic design elements and processes: form, color, drawing, letterforms and typography, motion, and interactivity. Historical perspectives and social issues are also introduced. At the upper-division level, studio courses explore current uses of interactive media and new directions in visual communication design, including the study of time and motion, as well as virtual form and space in computer-generated environments. Through a balance of courses in theory, criticism, and practice, students develop an understanding of design principles. Most courses are taught as studios of no more than 22 students, which encourages individual growth and fosters a sense of community within the department.

The two-year Master of Fine Arts (MFA) program fosters mature, professional-quality work utilizing the most current technologies in the field of media arts. The program focuses on developing an individual thesis project that incorporates in-depth research and theoretical exploration of a topic, culminating in a final exhibition of work. Facilities and equipment in the department enable students to create work in two, three, and four dimensions. They expand opportunities for students to develop interactive media applications in a networked environment and advanced computer graphics. The department equipment includes computer laboratories with high-end PC and Macintosh computers and relevant software for the creation of works for print, Web, video, and other media, a fabrication laboratory with equipment ranging from table saws to three-dimensional printers to a CNC machine to create physical objects combined with electronics, and a print laboratory with high-quality printers.

The Department of Design|Media Arts reserves the right to hold for exhibition purposes examples of any work done in classes and to retain for the permanent collection of its galleries such examples as may be selected.

Undergraduate Study
The Design|Media Arts major is a designated capstone major. Students are required to complete an advanced project of their own that entails full engagement with the design process. Through their capstone work, students demonstrate their capacities for research, ideation/concept development, creative and design direction, communication strategy, design, production/fabrication, and critical analysis. Capstone courses focus on career choice, and final projects are showcased at the spring Senior Show.

Design|Media Arts BA

Preparation for the Major
Required: Design|Media Arts 8, 10, 21, 22, 24, 25, 28.

The Major
Required: Twelve upper-division courses: Design|Media Arts 101, 102, six courses selected from 152, 153, 154, 155, 157, 161, 163; three courses selected from 160, 171, 172, 173; and one capstone course selected from 159A, 159B, or 159C.

It is recommended that students have each term’s program approved by the departmental adviser.

Note: Consult the Schedule of Classes for courses limited to majors only.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degree
The Department of Design|Media Arts offers the Master of Fine Arts (MFA) degree in Design|Media Arts.

Design|Media Arts

Lower-Division Courses
1. Graphic Design. (2) Studio, 30 hours. Limited to high school students. Basic and advanced photography skills using digital cameras. Alteration/manipulation of photos using techniques from latest version of Adobe Photoshop. Uploading of images on Web or in print. Production of digital and print portfolio of student work. Field trips to surrounding West Los Angeles locales to shoot photos. May be repeated for credit without limitation. Offered only as part of Summer Institute. P/NP grading.

2. Web Design. (2) Studio, 30 hours. Limited to high school students. How Web design works: basic hand coding and creation of personalized homepages with Macromedia Director and Flash software. Photograph scanning and manipulation of images in Adobe Photoshop to incorporate student web designs. Critique of various Web pages to analyze successful use of design and understand the potential of the Internet. May be repeated for credit without limitation. Offered only as part of Summer Institute. P/NP grading.

3. Game Design. (4) Studio, 30 hours. Limited to high school students. Development of fundamental skills to create games and game art that express personal and subjective approach to game making. Artistic vision combined with technological expertise to teach students fundamentals of designing games, building game worlds, creating game characters, and making playable games for mobile platforms. Use of current software and technology, including Maya and Unity3D. Creation of game projects that students exhibit and can use for college applications. Offered only as part of UCLA Game Lab Summer Institute. P/NP grading.

4. Audio Video Design. (2) Studio, 30 hours. Limited to high school students. Creation of storyboard for short documentary, commercial, or music video. Students shoot and edit their own work by learning fundamentals of preproduction and postproduction using latest digital software, Adobe Premiere and After Effects, to create their work. Burning of DVD of finished production. Visits from professional video producer to help guide students in creating their own videos. May be repeated for credit without limitation. Offered only as part of Summer Institute. P/NP grading.

5. Introduction to Design | Media Arts. (4) Studio, 40 hours. Limited to high school students. Two-week summer course designed to meet needs of high school students interested in exploring their creative potential within fields of design media arts, with focus on concepts of narrative and storytelling. Introduction to and exploration of variety of media such as graphic, web, game, and video design with goal of combining and integrating these media to express and realize their narrative projects. Students work with most current software and technology in each discipline area, developing diverse skill sets while cultivating conceptual capabilities around storytelling project, and with experienced instructors and professionals in field to develop projects utilizing this comprehensive and integrative approach. Culminates in portfolios that may be used for college applications. Possible field trips. May be repeated for credit without limitation. Offered only as part of Summer Institute. P/NP grading.

6. Art|Science and Technology Studio/Laboratory. (4) Studio/laboratory, 40 hours. Limited to high school students. Two-week studio/laboratory lec-tures, required screenings, laboratory visits, field trips, and outside study. Exploration of creative aspects of scientific research and innovation to gain broad understanding of impact of science on contemporary art and popular culture, with focus on new sciences of biotechnology and nanotechnology. Development of proposals and ideas that could serve as prototypes for either art projects or scientific research study. P/NP grading.

7. Media Histories. (5) Lecture, three hours; outside study, 12 hours. Synthetical overview of optical media and aesthetic movements covering past two centuries: photography and industrialization/Romanticism (1850 to 1900), cinema and modernism (1900 to 1950), television and postmodernism (1950 to 2000), and digital media and unmodernism (2000 to 2050). How such movements can inform creative work and how understanding these media becomes essential in emerging era of digital humanities. P/NP or letter grading.

8. Art, Science, and Technology. (5) Lecture, three hours; discussion, one hour; outside study, 11 hours. Exploration and survey of cultural impact of scientific and cultural innovations, technology-driven art inspired by science, and art/science collaborative projects. Introduction to vast array of cutting-edge research taking place on campus; scientific guest lecturers. Emphasis on art projects that use technology and respond to new scientific concepts. P/NP or letter grading.
21. Drawing and Color. (4) Studio, six hours; outside study, six hours. For drawing, exploration of relationship between concept and image creation while fostering development of sound drawing and observational skills. For color, exploration of development of fundamental skills in mixing and applying pigments with brush on watercolor paper, as well as use of computer and with colors. Combination of painting and software to be predominant way of exploring and presenting ideas regarding color. P/NP or letter grading.

22. Form. (4) Studio, six hours; outside study, six hours. Interection of two-dimensional surfaces and three-dimensional forms with traditional and experimental materials as foundation for creativity; origination and solution of problems. P/NP or letter grading.

24. Motion. (4) Studio, six hours; outside study, six hours. Introduction and integration of traditional design tools, camera, and digital technologies for application to visual thinking and fundamentals of design. P/NP or letter grading.

25. Typographic Design. (4) Studio, six hours; outside study, six hours. Focus on three typographic basics: letter, text, and grid. Introduction to fundamentals of typography. Assignments designed to develop understanding and theory of letter shape and its single elements and as texture in layout. Emphasis on grid (structure and layout) and information hierarchy to create successful typographic messages. P/NP or letter grading.

28. Interactivity. (4) Studio, six hours; outside study, six hours. Requisites: courses 21, 22, 25. Introduction to concept of interactivity and field of media art that follows history of computer as media for artistic exploration of life and theory of 20th and 21st centuries. Students will gain an understanding of how various design practices and skills that support the development of interactive art and games. Courses required. Requisite: course 101 or 104. Use of typical materials as foundation for creativity; origination and articulation of methodology for visualization. P/NP or letter grading.

156. Three-Dimensional Modeling and Motion. (5) Studio, six hours; outside study, nine hours. Preparation: completion of prepa- ration for major courses. Requisites: courses 21, 22, 25, and 101 or 104. Focus on relationship of type to concepts, imagery, and techniques and in development of typographic and typographic approaches. Development of Acquaintance with typographic practice and theory of 20th and 21st centuries, including history of technology and various arts within broad historical and cultural framework.

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Upper-Division Courses

101. Media Arts: Introduction. (5) Lecture, three hours; outside study, 12 hours. Limited to nonmajors. Introduction and re- quired of Design/Media Arts majors. Survey of media arts, their history, aesthetics, and cultural roles from late-19th century to present. Investigation of media arts within broad historical and cultural framework. Discussion of parallels and links with other cultural forms, including history of technology and various art and design practices. P/NP or letter grading.

104. Design Futures. (5) Lecture, three hours; outside study, 12 hours. Preparation: completion of preparation for major courses. Open to nonmajors with consent of instructor. Critical examination of de- sign practice and theory of 20th and 21st centuries incorporating historical as well as speculative meth- ologies. Consideration of how various design prac- tices and techniques related to each other across cultures and media, with emphasis on communica- tion design. P/NP or letter grading.

152. Tangible Media. (5) Studio, six hours; outside study, nine hours. Requisites: courses 22, 28, and 101 or 104. Through workshops, readings, lectures, cri- tiques, and presentations, students will gain an understanding of what is technically possible, sen- sible, logical, and intuitive.

153. Video. (5) Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Requisite: course 101 or 104. Use of video technology (video systems, cameras, displays, editing, and storage) to integrate image, sound, time, and motion. Emphasis on expression, continuity, and sequential patterns for video communication. P/NP or letter grading.

154. Word + Image. (5) Studio, six hours; outside study, nine hours. Preparation: completion of prepa- ration for major courses. Requisites: courses 21, 22, 25, and 101 or 104. Focus on relationship of type to concepts, imagery, and techniques and in development of typographic and typographic approaches. Development of Acquaintance with typographic practice and theory of 20th and 21st centuries, including history of technology and various arts within broad historical and cultural framework.

156. Three-Dimensional Modeling and Motion. (5) Studio, six hours; outside study, nine hours. Preparation: completion of prepa-ration for major courses. Requisites: courses 21, 22, 25, and 101 or 104. Focus on relationship of type to concepts, imagery, and techniques and in development of typographic and typographic approaches. Development of Acquaintance with typographic practice and theory of 20th and 21st centuries, including history of technology and various arts within broad historical and cultural framework.

157. Game Design. (5) Studio, six hours; outside study, nine hours. Preparation: completion of prepa-ration for major courses. Requisites: courses 21, 22, 25, and 101 or 104. Introduction to game design, with focus on development conceptual and practical skills that form basis for both digital and nondigital game development. Development of Acquaintance with typographic and typographic approaches that explore various aspects of game design: rule design, game balance, multiplayer strategy, com- plexity, randomness, polemics, narrative, physical in- teraction, and aesthetic and pragmatic aspects of physical game design. P/NP or letter grading.

172. Narrative. (5) Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Requisites: courses 21, 22, 25, and 101 or 104. Focus on development conceptual and practical skills that form basis for both digital and nondigital game development. Development of Acquaintance with typographic and typographic approaches that explore various aspects of game design: rule design, game balance, multiplayer strategy, com- plexity, randomness, polemics, narrative, physical in- teraction, and aesthetic and pragmatic aspects of physical game design. P/NP or letter grading.

Interactivity and Games. Requisites: courses 101, 104, 154, 156, and 159A. Study of two-dimensional and three-dimensional CAD, basic
milling, laser cutting, mold making, circuit building, and other sculptural electronics fabrication techniques. Letter grading.

269. Graduate Seminar. (4) Seminar, four hours. Designed for graduate design/media arts students. Survey of critical theories in media art and design. Critical examination of student work by peers, faculty members, and expert guests. Must be taken twice for MFA degree. May be repeated for credit with consent of adviser. Letter grading.

272. Introduction to Art | Science. (5) Seminar, three hours. For past 50 years artists have increasingly moved from being inspired by scientific innovation and discovery to actually collaborating with scientists and even residing and working in science laboratories. History of science in relation to artists' interpretation of scientific work to current works that are created in response to recent developments in biotechnology and nanotechnology. Letter grading.

289. Special Topics in Design. (2 to 8) Seminar, to be arranged. Examination of specific problems relevant to design theory and performance. Topics announced in advance. May be taken for maximum of 8 units. Letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

403. Graduate Critique. (2) Seminar, three hours; outside study, three hours. Limited to first- and second-year departmental graduate students. Students meet with instructor in small classroom setting to exchange ideas through presentation of current projects and research, discussion, research papers, and reports. Instructors may invite visiting critics to contribute. May be repeated for credit. S/U grading.

404. Graduate Tutorial. (3) Tutorial, three hours; outside study, six hours. Limited to first- and second-year departmental graduate students. Development of body of work while working toward MFA degree, with one-to-one interaction between students and faculty members. May be repeated for credit. Letter grading.

495. Teaching Assistant Training Practicum. (2) Seminar, three hours; outside study, three hours. Forum for first-year teaching assistants for discussion and exploration of teaching pedagogy and classroom mechanics. Problems and practices of teaching design at college level, as well as role of teaching assistants within department. Designed to help new teaching assistants develop teaching skills and to orient them to department and University policies and resources. May not be applied toward degree requirements. S/U grading.

596. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. May be repeated for credit with consent of adviser. S/U or letter grading.

597. Preparation for MFA Comprehensive Examination. (4 to 8) Tutorial, to be arranged. Designed for second-year MFA students to prepare for comprehensive examination. May be repeated for credit with consent of adviser. S/U grading.

598. MA Research and Thesis Preparation. (4 to 12) Tutorial, to be arranged. Designed for second-year MA students. May not be applied toward minimum graduate course or unit requirements for MA degree. May be repeated for credit. S/U grading.

DIGITAL HUMANITIES

Interdisciplinary Minor
College of Letters and Science

212 Royce Hall
Box 951539
Los Angeles, CA 90095-1539
310-825-1147
dhmminor@ucla.edu
http://www.cdh.ucla.edu/curriculum/
undergraduate-minor/

Todd S. Presner, PhD, Chair

Faculty Committee
Jon A. Christensen, PhD (Environment and Sustainability)
Dana Cuff, PhD (Architecture and Urban Design)
Maria (Maite) T. de Zubiaurre, PhD (Germanic Languages, Spanish and Portuguese)
Johanna R. Drucker, PhD (Design/Media Arts, Information Studies)
Christopher Johnson, PhD (Classics)
Christopher M. Kelty, PhD (Society and Genetics)
Stephen D. Mammer, PhD (Film, Television, and Digital Media)

Todd S. Presner, PhD (Comparative Literature, Germanic Languages)
Janice L. Reff, PhD (History, Statistics)
Francis F. Steen, PhD (Communication)
Wilke Z. Wendrich, PhD (Near Eastern Languages and Cultures)

Scope and Objectives

The Digital Humanities minor is an interdisciplinary minor that studies the foundations and futures of the digital world. Digital humanities interprets the cultural and social impact of the new information age as well as creates and applies new technologies to answer cultural, social, and historical questions, both those traditionally conceived and those enabled by new technologies. The interdisciplinary curriculum draws on faculty members from more than 15 departments, five schools, and three research centers at UCLA. It places project-based learning at the heart of the curriculum, with students working in collaborative teams to realize digital research projects with real-world applications. Students use tools and methodologies such as three-dimensional visualization, data-mining, network analysis, and digital mapping to conceptualize and advance research projects. Students have the opportunity to make significant contributions to scholarship in fields ranging from archaeology and architecture to history and literature. By preparing students to be active participants in the design and production of new knowledge, the minor emphasizes the critical thinking skills, creativity, and collaborative methodologies necessary for success in the digital information age.

Undergraduate Study

Digital Humanities Minor

The Digital Humanities minor is intended to provide students with literacy in creating, interpreting, and applying the technologies of the digital world. It examines the cultural and social impact of new technologies and enables students to harness these technologies to develop their own research projects in a wide range of fields.

To apply for the minor, students must (1) have an overall grade-point average of 2.7 or better and (2) submit an application essay supporting their interest in pursuing the minor and enumerating any digital projects that they have already undertaken. On acceptance to the minor, students are expected to identify an academic area of digital humanities in which they intend to concentrate. Information about the minor is available on the minor website. To submit an application for the minor, see the website.


Required Upper-Division Courses (25 to 28 units): Digital Humanities 101, 150, 196 or 199, and four elective courses selected from Ancient Near East M101C (or Art History M110C), M125A, M125B (or Architecture and Urban Design M125B), M125C (or Architecture and Urban Design M125C), 162, C165, CM169 (or Anthropology CM1100), Anthropology M116R (or Chinese M183), Architecture and Urban Design 132, Armenien C153, Art History C145A, C145B, Classics 164, 166B, Design/Media Arts 104, Digital Humanities 195 or 196, English 118A, History 188, Korean 183, 187, Russian 121, 129, Scandinavian C133A, C171, Society and Genetics 131, 175, Spanish 130, 150, 170, Urban Planning 129, 141. Variable topics courses may be taken as topics apply. A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.

Digital Humanities

Lower-Division Course

30. Los Angeles Tech City: Digital Technologies and Spatial Justice. (8) Lecture, two and one half hours; studio, two hours. Investigation of spatial justice and injustice in multi-ethnic city of Los Angeles through Lens of three thematic technologies that built and transformed Los Angeles into global metropolis: cars and highways, networking technologies culminating in Internet and World Wide Web, and film and broadcast media. Use of innovative forms of investigation and communication, from digital mapping to video-sensing, to integrate interpretative and historical approaches of humanities with material and projective practices of design. Letter grading.

Upper-Division Courses

101. Introduction to Digital Humanities. (5) Lecture, four hours; discussion, one hour. Foundation course for students in Digital Humanities minor, providing theoretical and conceptual framework for understanding genesis of digital world. Use of contemporary cultural/critical methodology to focus on rise of new media and information technologies in 19th, 20th, and 21st centuries, such as photography, film, radio, television, internet, and...
Undergraduate Study

Disability Studies Minor

To enter the Disability Studies minor, students must (1) have an overall grade-point average of 2.7 or better and (2) submit an application essay expressing their interest in pursuing the minor. To help plan the internship and course schedule, students are expected to work closely with the minor’s academic advisor. Applications are available on the minor website and must be filed with College Academic Counseling, A316 Murphy Hall. For information and questions, e-mail ppalomo@college.ucla.edu or call 310-206-1667.


Required Upper-Division Internship/Apprenticeship Courses (8 units): Two consecutive terms of internship or research apprenticeship (Disability Studies 195CE or 196) in a community-based agency that provides services or support for persons with disabilities or in an institution or agency at the local, state, or federal level responsible for policy on disability issues or collaboration on a research project focused on an area of disability studies scholarship. Undergraduate internship for students participating in the UC Santa Cruz Center for American Politics and Public Policy (CAPP) program may be substituted by petition and is subject to approval by the faculty committee.

Required Upper-Division Capstone Courses (5 to 6 units): Disability Studies 191 or 198A and 198B or 199A and 199B. Prior to enrolling in any capstone option, students must complete Disability Studies 101 or 101W, two upper-division electives, and at least one term of an internship or apprenticeship.

The capstone experience for the minor requires an integrative final paper or project that incorporates the required curriculum and elective courses. Students complete the capstone experience by enrolling in a senior research seminar (Disability Studies 191) or by enrolling in two-term independent study courses (198A and 198B or 199A and 199B) under the guidance of a faculty sponsor. The faculty sponsor approves the proposed readings as well as the length and scope of the final paper or project.
based on guidelines developed by the faculty committee for the minor. A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade point average of 3.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Disability Studies

Lower-Division Course

10. Intersections of Art History and Disability Studies: Disability in Modern Art. (5) Lecture, four hours. Broad overview of presence of disability and its manifestations through modern art in the 19th and 20th centuries. Introduction of historical development and fundamental intellectual and ethical issues associated with representation of disability in arts and humanities. Investigation of complex relations between artistic human figures and visual culture in construction of major facets of society and culture. Introduction of new methodology and language to build framework around how disability might fit into discourse of modern art as alternative way of knowing and how disability informs modern art by way of radical aesthetics of representation that challenges sociocultural norms. Consideration of how disability aesthetics informs photography, performance art, outsider art, and curatorial practices. P/NP or letter grading.

Upper-Division Courses

101. Perspectives on Disability Studies. (5) Lecture, one hour; discussion, two hours. Not open for credit to students who have taken course 101W. Creation of critical framework for understanding concept of disability from sampling of disciplinary perspectives. Organized around productive and central tension in disability studies—between disability as lived subjective experience that is both individual and communal, and disability as objective, medical, legal, and sometimes stigmatized category. Students encouraged to make connections between disciplines and to create their perspectives on disability in field that defines itself by how it changes. Letter grading.

101W. Perspectives on Disability Studies. (5) Lecture, one hour; discussion, two hours. Enforced prerequisite: English Composition 3 or 3H. Broad overview of presence of disability and its manifestations through modern art in the 19th and 20th centuries. Introduction of historical development and fundamental intellectual and ethical issues associated with representation of disability in arts and humanities. Investigation of complex relations between artistic human figures and visual culture in construction of major facets of society and culture. Introduction of new methodology and language to build framework around how disability might fit into discourse of modern art as alternative way of knowing and how disability informs modern art by way of radical aesthetics of representation that challenges sociocultural norms. Consideration of how disability aesthetics informs photography, performance art, outsider art, and curatorial practices. P/NP or letter grading.

110. Disability and Popular Culture. (4) Lecture, four hours. Drawing from disability studies, media studies, and cultural studies, examination of increasing visibility of people with disabilities in popular culture. How disability is represented and who gets to represent it. Analysis and critique of representations of people with disabilities in late 20th and early 21st century cinema and television to understand functioning of representation in popular culture. Development of critical media literacy skills. P/NP or letter grading.

111. Disability as Spectacle: Performing Nonnormative Bodies. (4) Lecture, four hours; studio, two hours. Examination through eyes of disability activists and artists interrogating how aspects of body get defined as normal or abnormal in what it means to push against pressure to fit in, as well as how to contest invisibility of some disabilities that happen when normal bodies get defined visually. Use of this lens to offer research and explore role that bodies play in political battles over who gets socially valued and who does not. P/NP or letter grading.

114. Variable Topics in Performance and Disability Studies. (4) Same as Theater M114.) Seminar, four hours. Analysis and critique of depiction of disability in theater. Topics may include introduction to disability studies; race, gender, and disability; representation of disability in theater; and more. May be repeated for credit with topic or instructor change. P/NP or letter grading.

115. Enforcing Normalcy: Deaf and Disability Studies. (4) Same as American Sign Language M115.) Lecture, three hours. Exploration of historical, medical, social, political, philosophical, and cultural influences that have constructed categories of normalcy, disability, and deafness. Building on writing of Michael Foucault, in field of disability studies, inquiry into institutions that have enforced standards of normalcy throughout 19th and 20th centuries to present. Primary attention to rise of medical authority figures of the 19th and 20th centuries, and contemporary bioethics issues confronting deaf and disability communities. P/NP or letter grading.

120. Special Topics on Race and Disability. (4) Lecture, four hours. Exploration of race and disability, with particular focus on experiences of people of color with disabilities. Use of scholarly texts from disability studies, sociology, gender studies, or critical race studies to investigate and critique mechanisms and systems that shape race, ableism, and dominant/non-dominant power dynamics. P/NP or letter grading.

M121. Topics in Gender and Disabilities. (4) Same as Gender Studies M121.) Lecture, three and one half hours. Historical and current ways in which issues of disability are affected by gender, with particular attention to various roles, positions, and concerns of women with disabilities. Approach is intersectional, exploring how social categories of class, race, ethnicity, religion, age, sexuality, nationality, and citizenship affect and are affected by gender and disability. Topics may include law (civil rights, nondiscrimination, legislation, literature), education, accommodation, public health. May be repeated for credit with topic and instructor change. P/NP or letter grading.

M122. Bodies in Antiquity. (4) Same as Classics M149.) Seminar, four hours. Examination of the intersection of individual and larger aspects of disability. How the body is viewed and represented in ancient Greek and Roman societies and in representations of athleticism and other aspects of culture. Focus on historical roots as new, rare, and obscure condition in early 1940s to its current contested status as minority iden-
M164A. Documentary Production for Social Change: Mobility in Los Angeles. (5) (Same as Urban Planning M164A.) Seminar, three hours; fieldwork, two hours. Exploration of documentary filmmaking as catalyst for social change, using daily active content as course study. Instruction includes an examination of issues of race, ethnicity, gender, disability, and class on experiences of commuting, access to public transportation, and car-based versus alternative (bike and pedestrian) forms of commuting. Exposure to observational, interview-based, and participatory documentary shooting and editing techniques, as well as social marketing strategies that are vital to documentary production. P/NP or letter grading.

M164B. Documenting Dis/Ability on Film. (4) Lecture, four hours. Nonfiction digital media is used as contemporary form of investigation or research or as attached to research projects, built into websites, used in campaigns for social and political activism, and exhibited at film festivals. Social-issue documentaries appear more frequently on cable, public television, and Internet. Examination of how powerful documentaries still rely on well-told stories by passionate filmmakers. P/NP or letter grading.


187. Special Topics in Disability Studies. (4) Lecture, three hours. Variable topics in one area within disability studies. May be repeated for credit with topic and/or instructor change. P/NP or letter grading.

191. Variable Topics Senior Research Seminars: Disability Studies. (5) Seminar, three hours. Enforced requisite: course 101 or 101W. Designed for advanced junior/senior Disability Studies minors. In-depth study of major themes in disability studies research. Themes vary by instructor and term. Students pursue independent research related to course theme, with guidance from instructor, then share and critique other student works in progress. May be repeated for credit with topic change. Letter grading.

194. Capstone Research Seminar. (2) Seminar, two hours. Enforced requisite: course 195CE. Required of students pursuing Disability Studies minor. Integration of off-campus work with academic theories and concepts within field of disability studies. Students report on their internship experiences and analyze relationship between their internship and issues of policy, ethics, systemic responses to community needs, or personal and intellectual transformations. Students identify one faculty mentor and develop proposal for required capstone research project. Letter grading.

195CE. Community and Corporate Internships in Disability Studies. (4) Tutorial, to be arranged; fieldwork, eight to 10 hours. Limited to juniors/seniors. Internship in corporate, governmental, or nonprofit setting coordinated through Center for Community Learning. Students complete weekly written assignments, attend biweekly meetings with graduate student coordinator, and prepare final paper. Faculty sponsor and graduate student coordinator construct series of reading assignments that examine issues related to internship site. May be repeated for credit with consent of Center for Community Learning. Individual contract with supervising faculty member required. Letter grading.

Related activities; others are involved in mineral sciences, environmental policy, and public health. Those who intend to become professional geologists, geochemists, or geophysicists and/or to continue into graduate studies in Earth or space sciences are urged to pursue one of the BS degrees.

Undergraduate Study
All of the majors offered in the Earth, Planetary, and Space Sciences Department are designated capstone majors. While the specific nature of the capstone experience varies by major, students are required to use skill and knowledge sets from previous coursework to complete a field-based research project from conception to written report. Projects must be placed into context within the current state of understanding, and results are presented at a research symposium or published as a brief report.

Earth and Environmental Science BA

Capstone Major

Preparation for the Major
Required: Earth, Planetary, and Space Sciences 1, 5 or 8 or 13 or 15 or 16 or 17 or 20, 51, 61; Chemistry and Biochemistry 14A, 14B, and 14BL; or 20A, 20B, and 20L; Life Sciences 1 or another introductory organismic biology course; Mathematics 3A and 3B, or 31A and 31B; Physics 1A or 5A. Each course must be passed with a minimum grade of C–.

Transfer Students
Transfer applicants to the Earth and Environmental Science major with 90 or more quarter units (60 semester units) must have completed one introductory Earth sciences course, one year of calculus, and two general chemistry courses with laboratory for majors.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major
Required: Earth, Planetary, and Space Sciences 103A, 103B, 111, 112, 136A, 139; Civil and Environmental Engineering 108, 120, 121, 150; two capstone field research courses (Earth, Planetary, and Space Sciences 121, 121F).

Geology BA

Capstone Major

Preparation for the Major
Required: Earth, Planetary, and Space Sciences 1, 5, 61; Chemistry and Biochemistry 14A, 14B, and 14BL; or 20A, 20B, and 20L; Life Sciences 1; Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A; Physics 1A, 1B, 4AL, and 4BL, or 5A and 5B. Each course must be passed with a minimum grade of C–.

Transfer Students
Transfer applicants to the Geology major with 90 or more quarter units (60 semester units) must have completed one introductory Earth sciences course, one year of calculus, and two general chemistry courses with laboratory for majors.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major
Required: Earth, Planetary, and Space Sciences 103A, 103B, 111, 112, M118 (or 136A); two courses from 103C, 116, and 133; two capstone field research courses (121, 121F); two additional 100-level department courses.

Geophysics BA

Capstone Major

Preparation for the Major
Required: Earth, Planetary, and Space Sciences 103A, 103B, 111, 112, 116, 119; one capstone 199 research course in the senior year; three additional upper-division courses from Earth, Planetary, and Space Sciences other than 100; two courses from Geophysics 100, 101, 104, 105, 105A, M107, M109, 110, 124, 125, M127, M131.

Engineering Geology BS

Capstone Major

Preparation for the Major
Required: Earth, Planetary, and Space Sciences 1, 51, 61; Chemistry and Biochemistry 20A, 20B, 20L; Civil and Environmental Engineering 210; Mathematics 31A, 31B, 32A, 33A; Physics 1A, 1B, 1C, 4AL, 4BL. Recommended: Mathematics 32B. Each course must be passed with a minimum grade of C–.

Transfer Students
Transfer applicants to the Engineering Geology major with 90 or more quarter units (60 semester units) must have completed one introductory Earth sciences course, two general chemistry courses with laboratory for majors, and one year of calculus. A second year of calculus is recommended.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major
Required: Earth, Planetary, and Space Sciences 103A, 103B, 111, 112, 136A, 139, Civil and Environmental Engineering 108, 120, 121, 150; two capstone field research courses (Earth, Planetary, and Space Sciences 121, 121F).
The Major

Required Core: Earth, Planetary, and Space Sciences 136A, M140, 171, one capstone field research course (136C), one course from 152, 153, 154, 155; Physics 105A, 105B, 110A, 110B, 131. Substitutions of equivalent courses from engineering or other physical sciences departments must be approved by the undergraduate adviser.

At least three courses from one of the following areas are also required: (1) applied geophysics—Earth, Planetary, and Space Sciences 111, 112, 136B, 150, 152, (2) marine geophysics—courses 119, 122, 136B, 150, 153, (3) planetary geophysics—courses 150, 153, 154, 155, (4) solid earth geophysics—courses 119, 122, 136B, 150, 152, or (5) space physics—Atmospheric and Oceanic Sciences C170, Earth, Planetary, and Space Sciences 136B, 154, 155, Physics M122. Any course used to satisfy an area requirement cannot also be applied toward the core requirements listed above.

Honors in Geology or Geophysics

The honors program in geology or geophysics is intended to provide exceptional students an opportunity for advanced research and study under the tutorial guidance of a faculty member. Requirements for admission to candidacy are the same as those required for admission to the Honors Programs of the College of Letters and Science. Qualified students wishing to enter the program must submit a completed application form to the departmental honors committee near the end of their junior year. Honors in geology or geophysics are awarded at graduation to those students who have a cumulative grade-point average of 3.5, have completed at least 90 graded units at the University of California, and have completed a minimum of two terms (8 units) of Earth, Planetary, and Space Sciences 198 leading to the preparation of a satisfactory honors thesis. Students demonstrating exceptional ability are awarded highest honors.

Earth and Environmental Science Minor

In the Earth and Environmental Science minor students study the interaction of the solid Earth, oceans, and atmosphere with human activities. The minor provides background in Earth sciences that is especially appropriate for students intending to become K through 12 teachers in Earth, physical, or life sciences. It may also be of interest to students who plan careers in business, dentistry, environmental sciences, government, journalism, law, medicine, or public health.

To enter the minor, students must have completed a minimum of 20 upper-division units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

A minimum of 20 upper-division units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Geochemistry Minor

Geochemistry emphasizes use of minerals, magmas, elements, and isotopes to date events, determine rates, and track matter through its cycles in the planets and biosphere. These skills are valuable in environmental and natural-resource work and anthropology, as well as in studying the histories of the planets.

To enter the Geochemistry minor, students must have an overall grade-point average of 2.0 or better.

Geophysics and Planetary Physics Minor

Classical physics, supported by field data, mathematics, and computing, is used to understand diverse processes from ocean circulation and earthquakes to the formation of planets and the flow of particles and electromagnetic fields in space. These skills are valuable in environmental, engineering, and resource studies and more broadly in any kind of career that requires quantitative analysis.

To enter the Geophysics and Planetary Physics minor, students must have an overall grade-point average of 2.0 or better.

Required Lower-Division Courses (12 units):
Earth, Planetary, and Space Sciences 1, 8, 9.

Required Upper-Division Courses (20 units):
Earth, Planetary, and Space Sciences 136A, 171, and three courses from M140, 152, 153, 154, 155.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Earth, Planetary, and Space Sciences offers Master of Science (MS), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Geology, Master of Science (MS), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Geology, and Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Geochemistry and Physics.

Earth, Planetary, and Space Sciences

Lower-Division Courses

1. Introduction to Earth Science. (5) Lecture, three hours; laboratory, two hours; field days. Not open to students with credit for or currently enrolled in course 100. Elements of Earth science; study of Earth materials; nature and interpretation of geologic evidence; study of geologic processes; historical geology. Mandatory field trips introduce students to solving of geologic problems in field. P/NP or letter grading.

3. Astrobiology. (5) Lecture, three hours; discussion, one hour; two field days. Origin, evolution, distribution, and future of life on Earth and in universe, paralleling major scientific initiative of NASA. Course material primarily from planetary and Earth science, pale-
ontology and biology, astronomy, chemistry, and physics, with relatively little from mathematics. P/NP or letter grading.

5. Environmental Geology of Los Angeles. (4) Lecture, three hours; discussion, two hours; field trips. Geologic hazards and natural resources of greater Los Angeles region. Topics include Los Angeles geologic hazards such as earthquakes, landslides, and floods; Southern California oil fields; gold and gem mining in region; local beach processes; and Los Angeles water resource problems. Field trips to San Andreas fault, California aqueduct, active landslides, and historic gold mines. P/NP or letter grading.

7. Perils of Space: Introduction to Space Weather. (4) Lecture, three hours; laboratory, two hours; discussion. Dynamic sun, solar wind, and Earth's magnetosphere and ionosphere. Space storms and substorms and their impacts on astronauts, spacecraft, and surface power and communication grids. P/NP or letter grading.

Earthquakes. (5) Lecture, three hours; laboratory, one hour; one field day. Causes and effects of earthquakes. Plate motion, frictional faulting, earthquake installation, wave propagation, earthquake damage, and other social effects. Hazard reduction through earthquake forecasting and earthquake-resistant design. P/NP or letter grading.


Natural Disasters. (5) Lecture, three hours; discussion, one hour; one field day. Global urbanization together with historical demographic population shift to coastal areas, especially around Pacific Ocean’s “Ring of Fire,” are placing increasingly large parts of this planet’s human population at risk due to earthquakes, volcanoes, and tsunamis. Global climate change will increase frequency and intensity of geologic processes to create enhanced risks from catastrophic mass movements (e.g., landslides), hurricanes, floods, and fires. Exploration of physical processes behind natural disasters and how these natural processes affect quality of human life. P/NP or letter grading.

Blue Planet: Introduction to Oceanography. (5) Lecture, three hours; laboratory, two hours. Not open for credit to students with credit for or currently enrolled in Ecology and Evolutionary Biology 25. General introduction to geological, physical, chemical, and biological processes and history of Earth’s global ocean system. P/NP or letter grading.

Major Events in History of Life. (4) Lecture, three hours; laboratory, two hours. Designed for nonmajors. History of life on Earth as revealed through fossil record. P/NP or letter grading.

Dinosaurs and Their Relatives. (5) Lecture, three hours; laboratory, two hours; one optional field trip. Designed for nonmajors. Exploration of biology, evolution, and extinction of dinosaurs and close relatives, in context of history of biosphere. Information from paleontology, biology, and geology. P/NP or letter grading.

Natural History of Southern California. (5) Lecture, two hours; laboratory, three hours; five field weekends. Identification, distribution, diversity of native plants and communities; identification and interpretation of rocks, minerals, and geologic features and geologic history of physiographic regions of Southern California. Emphasis on field-based learning. P/NP or letter grading.


61. Geologic Maps. (4) Lecture, two hours; laboratory, three hours; five field days. Enforced requisite: course 1. Planning, creation, and interpretation of geologic maps. Topographic and geologic mapping in field. Interpretation of published maps in laboratory. P/NP or letter grading.

71. Introduction to Computing for Geoscientists. (4) Lecture, three hours; laboratory, three hours; outside computing study, three hours. Introduction to writing programs in MATLAB, visualization of geoscience data, and comparison with models. P/NP or letter grading.

Upper-Division Courses

100. Principles of Earth Science. (4) Lecture, three hours. Designed for nonmajors. Not open to students with credit for or currently enrolled in course 101. Overview of Earth and Earth history; major problems of geology, such as continental drift and development of large-scale features of Earth; physical and biological evolution. P/NP or letter grading.

101. Earth’s Energy: Diminishing Fossil Resources and Prospects for Sustainable Future. (4) Lecture, three hours; laboratory, two hours; two optional field trips. Preparation; one lower-division atmospheric science or physics course. Earth’s energy resources (fossil fuels and alternatives) from Earth science and sustainability perspective. P/NP or letter grading.

103A. Igneous Petrology. (5) Lecture, two to three hours; laboratory, six hours; field trips. Enforced requisite: course 51, Chemistry 14B and 14BL, or 20B and 20L. Mineralogy, chemical composition, and field occurrence of igneous rocks with reference to their origin by melting in earth. Introduction to thermodynamics as applied to petrology. Formation of magma, its movement, eruption, and crystallization. Petrologic structure of crust and mantle and its relation to seismology. Overview of petrological and chemical evolution of Earth, moon, and other planets from their origin to present time. P/NP or letter grading.

103B. Sedimentary Petrology. (5) Lecture, two to three hours; laboratory, six hours; field trips. Enforced requisite: course 103A. Recommended: course 61. Study of sedimentary rocks based on characteristics of sedimentary particles and dynamics of depositional processes. Lectures focus on development of depositional facies models, and laboratories emphasize recognition of sedimentary deposits from each major depositional facies. P/NP or letter grading.

103C. Metamorphic Petrology. (5) Lecture, two to three hours; laboratory, six hours; field trips. Enforced requisite: course 103B. Interpretation of metamorphic rocks based on field occurrence, mineralogical composition, texture, and application of physical and chemical principles. P/NP or letter grading.

106. Physical Geochemistry. (4) Lecture, three hours. Requisite: course 51. Basic principles of physical chemistry for geologic applications. Thermodynamics and kinetics of reactions among minerals, natural waters, and magmas; construction and interpretation of phase diagrams; case studies of important geologic and environmental issues. Concurrently scheduled with course C206. P/NP or letter grading.

107. Geochemistry. (4) Lecture, three hours; discussion, one hour. Designed for junior/senior and graduate physical sciences students. Origin and abundance of elements and their isotopes; distribution and chemistry of elements in Earth and its environment. Concurrently scheduled with course C207. P/NP or letter grading.


111. Stratigraphic and Field Geology. (6) Lecture, two hours; laboratory, three hours; fieldwork, eight hours per week. Enforced prerequisites: courses 61, 112. Principles of stratigraphy; geologic mapping of selected area; preparation of geologic report. Letter grading.

112. Structural Geology. (5) Lecture, three hours; laboratory, six hours. Enforced prerequisite: courses 1, 61. Recommended: course 51. Planar and linear structures at different scales in sedimentary, metamorphic, and igneous rocks. Faults and folds, their description, classification, and kinematics. Deformation, strain, fracture, and rheological properties of rocks. P/NP or letter grading.

C113. Biological and Environmental Geochemistry. (4) Lecture, three hours; laboratory, one hour; Chemistry 14A and 14B (or 20A and 20B), Mathematics 3A, 3B, and 3C (or 31A and 31B). Recommended: at least one lower-division Earth, planetary, and space sciences course. Intended for junior/senior and graduate physical sciences students. Study of chemistry of Earth’s surface environment and interplay between biology, human activity, and geology. Introduction to origins and composition of Earth, moon, and other planets. P/NP or letter grading.

CM114. Aquatic Geomicrobiology. (4) Formerly named: CM114 (formerly substituted for C114). Lecture, three hours; discussion, one hour. Enforced prerequisite: course C107 or Atmospheric and Oceanic Sciences CM114). Lecture, three hours; discussion, one hour. Recommended requisite: course C107 or Atmospheric and Oceanic Sciences M105. Fundamentals of chemobiology and biogeochemical reactions occurring in aquatic systems, how they impact their environment, and how they interact in complex ecosystems such as methane seeps, hydrothermal vents, coral reefs, microbial mats, or deep biosphere. Metabolism, isotopes, and evolution of organic compounds. P/NP or letter grading.

Paleontology. (4) Lecture, three hours; laboratory, three hours; field trips. Required: course CM124. P/NP or letter grading.

M118. Advanced Paleontology. (4) (Same as Ecology and Evolutionary Biology M145.) Lecture, three hours. Recommended requisite: course 116 or Ecology and Evolutionary Biology 110 or 117. Consideration of major factors that have influenced history of life, including analytical approaches to understanding patterns in fossil record, nature of rock record, and contribution of data from stable isotopes, functional morphology, phylogenetics, and developmental biology. P/NP or letter grading.

119. Continental Drift and Plate Tectonics. (4) Lecture, three hours. Required: course 1 or 100. Designed for juniors/seniors in physical sciences. Classical concepts of sedimentation and tectonics. Alfred

120. Rubey Colloquium: Major Advances in Earth, Planetary, and Space Sciences. (4) Lecture, three hours; discussion, one hour. Designed for juniors and seniors. Lectures on major advances in Earth science offered by distinguished authorities (including regular faculty members). Supervision of continuation and assessment of student performance. Course content varies from year to year. If laboratory work is required, course 199 must be taken concurrently. P/NP or letter grading.

121. Advanced Field Geology: Fieldwork. (4) Fieldwork, 20 hours. Advanced techniques in field geological mapping and preparation of geologic maps and cross-sections, including igneous, metamorphic, and sedimentary terrains. P/NP or letter grading.

122. Introduction to Seismology. (4) Lecture, three hours; discussion, two hours; laboratory, one hour. Enforced requisites: Mathematics 31A, 31B, 32A, Physics 1A (or 1AH), 1B (or 1BH). Recommended: course 71, Mathematics 33B. Earth mantle and core. Elasticity, seismic wave equation, phase velocity, group velocity, time travel, surface waves, free oscillations. Earthquakes and source theory. P/NP or letter grading.

123. Geosciences Outreach. (4) Lecture, two hours; discussion, two hours; field days. Recommended requisites: courses 121, 122, 123. Enforced requisites: Mathematics 3A, 3B, 3C, or 31A, 31B, and 32A. Principles of communication of science in multicultural settings, including communication of science in multicultural settings. Active participation required in minimum of three scheduled outreach events over course of term, providing perspective and basis for follow-up discussions on criteria for scientific literacy at local, state, and national levels. Letter grading.

125. Volcanoes. (4) Lecture, three hours; laboratory, three hours; field trips. Enforced requisite: course 121A. Understanding genesis of igneous rocks based on geochemical, tectonochemical, and other geological evidence and principles. Concurrently scheduled with course C226. P/NP or letter grading.

133. Historical and Regional Geology. (4) Lecture, three hours; discussion, two hours; field trips. Enforced requisite: course 121A. Understanding genesis of igneous rocks based on geochemical, tectonochemical, and other geological evidence and principles. Concurrently scheduled with course C226. P/NP or letter grading.


137. Petroleum Geology. (4) Lecture, three hours; discussion, one hour. Enforced requisites: courses 61, 111. Geology applied to exploration for and production of natural gas and petroleum; techniques of surface and subsurface geology; problems of petroleum geology. P/NP or letter grading.

139. Engineering and Environmental Geology. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 1. Prerequisites and practice of soil mechanics and foundation engineering. Fundamentals of geotechnical engineering. Recognition, prediction, and control of liquefaction, landslides, earthquakes, and other geologic aspects of urban planning and subsurface disposal of liquids and solids. P/NP or letter grading.


C141. Basin Analysis. (4) Lecture, three hours; laboratory, three hours; field trips. Enforced requisite: course 122B. 111. Mechanisms of sedimentary basin development, flexural and thermal subsidence, isostasy, subsidence analysis, quantitative basin modeling, sediment provenance, tectonic settings. Concurrently scheduled with course C241. P/NP or letter grading.


C152. Advanced Petrology. (4) Lecture, three hours; laboratory, three hours; field trips. Enforced requisite: course 136A. Understanding genesis of igneous rocks based on geochemical, tectonochemical, and other geological evidence and principles. Concurrently scheduled with course C226. P/NP or letter grading.


154. Solar Terrestrial Physics. (4) Lecture, three hours; discussion, one hour. Enforced requisite or corequisite: Physics 110A. Particle and electromagnetic emissions from sun under quiet and under disturbed conditions. Solar wind. Magnetospheres and radiation belts. Other applications include materials processing, generation of electrical power, and fusion energy production. Letter grading.

C160. Field Seminar. (2 to 6) Seminar, three hours; discussion, one hour; fieldwork, five to 20 days. Required: course 61. Field-based teaching and discussion forum that varies in focus from general geology through structure and tectonics, sedimentology, igneous and metamorphic petrology, volcanology, or other subdisciplines as prescribed. May be repeated for credit. Concurrently scheduled with course C290. P/NP or letter grading.

C154. Solar Terrestrial Physics. (4) Lecture, five hours; laboratory, two hours. Required: course 150. Application of remote-sensing techniques to real situations. Geophysical approaches and methods used in geosciences to study the Earth and other planets. Other subdisciplines as prescribed. May be repeated for credit. Concurrently scheduled with course C290. P/NP or letter grading.

165. Tectonic Geomorphology. (4) Lecture, three hours; laboratory, two hours. Recommended requisite: course 1 or 8. Recommended: courses 61, 119, Mathematics 31A. Interactions between tectonic, climate, and surface processes shape landscapes over days to millions of years. Focus on how tectonic and surface processes interact to govern landscape evolution. How landscapes can provide insights into physical and chemical surface processes, including bedrock weathering, soil formation, hillslope transport, and river and glacial erosion. How tectonics, climate, and underlying lithology may influence those processes in landscapes. P/NP or letter grading.

171. Advanced Computing in Geosciences. (4) (Formerly numbered 134.) Lecture, three hours; laboratory, three hours. Enforced requisite: course 71, Mathematics 3A, 3B, and 3C (or 31A and 31B). Origin: programming and application of computational tools to analysis of geologic and geophysical problems affecting surface of Earth, such as tectonics and climate. Introduction to modern tools of computation and their application to solving and testing hypotheses during week between Winter and Spring Quarters. Concurrently scheduled with course C262. P/NP or letter grading.

CM173. Earth Process and Evolutionary History. (4) Same as Ecology and Evolutionary Biology CM173. Lecture, three hours; discussion, one hour; laboratory, two hours. Recommended prerequisite: Chemistry 14A, 14B (or 20A, 20B), Life Sciences 1, 2, 3, 4. Recommended: one course from Atmospheric and Oceanic Sciences M100, 101, 102, 103, M105, Ecology and Evolutionary Biology CM100, 120, 122, 123, 131, 135, 142, 152, 154, Geography 100, 101, or 103. Exploration of relationship between physical processes affecting surface of Earth, such as tectonics and climate, and biotic evolution. Geologic history of Earth from its formation and history of scientific advancement. Changes through time in Earth/atmosphere/ocean system discussed in terms of their effects on the evolution of life. Consideration of issues considered in this historical context of global process. Modern anthropogenic climate change placed in context of geologic record of climate change. Concurrently scheduled with course CM273. P/NP or letter grading.
C179. Search for Extraterrestrial Intelligence: Theory and Applications. (4) Lecture, two hours; laboratory, two hours. Enrolled: 31B, Physics 1B. Recommended: course 21, Computer Science 31, Physics 110B, Program in Computing 10A. Search for extraterrestrial intelligence (SETI) is based on number of astronomical, mathematical, statistical, and computational principles. Coverage of fundamental concepts in these disciplines, including abundance and architecture of extrasolar planetary systems; radio astronomy, including wave propagation and dispersion; signal processing, including sampling theory and Fourier transforms, and error correction; and hierarchical search for SETI, including Gaussian and Poisson statistics, and algorithm development. Design of observational program, acquisition of telescopic data, and development of algorithms to analyze data, and writing of report on results. Concurrently scheduled with course C279. P/NP or letter grading.

188. Special Topics in Earth, Planetary, and Space Sciences. (4) Lecture/laboratory, to be arranged. Departmentally sponsored experimental or temporary courses, such as those taught by visiting faculty members. P/NP or letter grading.

193A-193B-193C. Undergraduate Journal Club Seminars: Earth, Planetary, and Space Sciences. (1-1-1) Limited to upper-division and graduate students. Study of current topics in Earth, planetary, and space sciences, including participation in weekly department colloquium. May be repeated for credit. P/NP or letter grading.

C194. Research Topics in Earth, Planetary, and Space Sciences. (1) Research group meeting, one to three hours. Designed for departmental students participating in research group. Discussion of current research and literature in research specialty of faculty member teaching course. May be repeated for credit. Concurrently scheduled with course C296. P/NP or letter grading.

198. Honors Research in Earth, Planetary, and Space Sciences. (4) Tutorial, two hours. Limited to seniors. Individual research designed to broaden and deepen students’ knowledge of some phase of Earth, planetary, and space sciences. Development and completion of honors thesis or comprehensive research project under direct supervision of faculty mentor. May be repeated for maximum of 16 units. Individual contract required. Letter grading.

199. Directed Research or Senior Project in Earth, Planetary, and Space Sciences. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty member. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses


200B. Introduction to Geophysics and Space Physics II: Oceans and Atmospheres. (4) Lecture, three hours; requisites: Physics 105A, 110A, 112, 131. Evolution, chemistry, and heat balance of oceans and atmospheres; molecular spectra, radiative transfer, 1D atmospheric observations; oceans and atmosphere; S/U or letter grading.


200D. Planetary Surfaces. (4) Lecture, three hours. Introduction to basic physical processes (both exogenic and endogenic) shaping solid surfaces in solar system and description of their optical and thermophysical properties, with emphasis on simple physics-based approach. Discussion of current literature. S/U or letter grading.

200E. Planetary Origins and Evolution. (4) Lecture, four hours. Designed for graduate students who are interested in formation of planets and evolution of solar system. Open to advanced undergraduate students with consent of instructor. Provides background needed to understand and/or participate in research related to formation and evolution of solar system and of other planetary systems. Description of star/planet formation process and subsequent evolution of planets. Continuation of observational and theoretical research. Fosters interdisciplinary knowledge and communication between Departments of Earth and Space Sciences and Physics and Astronomy graduate students and faculty members. S/U or letter grading.


C206. Physical Geochemistry. (4) Lecture, three hours. Requisite: course 51. Basic principles of physical chemistry for geologic applications. Thermodynamics and kinetics of reactions among minerals, natural waters, and magmas; construction and interpretation of phase diagrams; studies of important geochemical and environmental issues. Concurrently scheduled with course C106. Additional independent research project and oral presentation required of graduate students. S/U or letter grading.

207. Geochemistry. (4) Lecture, three hours; discussion, one hour. Designed for junior/senior and graduate physical sciences students. Origin and abundance of isotopes; distribution and chemistry of elements in Earth and its environment. Concurrently scheduled with course C107. Additional homework and class presentation required of graduate students. S/U or letter grading.


210. Geochronometric Kinetics: Thermochronometry. (4) Lecture, three hours; discussion, one hour. Designed for graduate physical and biological sciences students. Theoretical basis and application of thermochrometry: derivation of diffusion equation and methods of solution, relationship between heat and mass diffusion and their simultaneous solution, Boltzmann/Matano analysis, multicomponent diffusion, closure theory; δAr/Ar systematics and interpretive models, diffusion and fission-track theory, petrological applications. Letter grading.

211. Mathematical Methods of Geophysics. (4) Lecture, four hours. Requisites: Physics 105A, 110A, 112, 131. Recommended: Physics 132. Designed to provide mathematical techniques required for students pursuing PhD in Geophysics and Space Physics, as well as related programs in department. Extensive survey of these methods, with focus on applications. P/NP or letter grading.

212. Fluid Dynamics. (4) Lecture, three hours. Requisites: Physics 105A and 105B or 14A and 14B or 20A and 20B, Mathematics 3A, 3B, and 3C or (31A and 31B). Recommended: at least one lower-division Earth, planetary, and space sciences course. Designed for graduate students. Study of physics of Earth’s surface environment and interplay between biology, human activity, and geology. Introduction to origin and composition of Earth, including heat, crust, and hydrosphere. Examination of how these reservoirs are affected by biological cycles and feedbacks to biogeochemical evolution and diversity. Local and global-scale movements of biogeochemical contaminants like carbon, nitrogen, and phosphorus. Concurrently scheduled with course C113. S/U or letter grading.

CM214. Aquatic Geobiology. (4) Formerly numbered C214.) (Same as Atmospheric and Oceanic Sciences CM214.) Lecture, two hours; discussion, one hour. Recommended prerequisite: course C107 or Atmospheric and Oceanic Sciences M105. Fundamental geobiological-microbiological metabolism and biogeochemical reactions occurring in aquatic systems, how they impact their environment, and how they interact in complex ecosystems such as methane seeps, hydrothermal vents, coral reefs, microbial mats, or deep ocean hydrothermal vents. Microorganisms are autotrophic, heterotrophic, and chemoheterotrophic pathways. Interpretation of geochemical profiles and understanding of how microorganisms govern mineralization and element cycling in aquatic systems. Concurrently scheduled with course CM114. S/U or letter grading.

216. Evolutionary Biology. (4) (Same as Ecology and Evolutionary Biology ME216.) Lecture, two hours; discussion, two hours. Current concepts and topics in evolutionary biology, including microevolution, speciation and species concepts, analytical biogeography, adaptive radiation, mass extinction, community evolution, molecular evolution, and development of evolutionary thought. S/U or letter grading.

M217. Molecular Evolution. (4) (Same as Ecology and Evolutionary Biology M231.) Lecture, two hours; discussion, two hours. Current concepts and topics in molecular evolution, with special emphasis on molecular phylogenetics. Topics may include nature of gene, neutral evolution, molecular clocks, concerted evolution, molecular systematics, statistical tests, and phylogenetic algorithms. Themes may vary from year to year. May be repeated for credit. S/U or letter grading.

219. Planetary and Orbital Dynamics. (4) Lecture, four hours. Planetary rotations, satellite orbits, and tidal dissipation; planetary orbital system; resonance effects and chaos; spin-orbit and orbit-orbit coupling; planetary rings. S/U or letter grading.

220. Principles of Paleobiology. (4) Lecture/discussion, three hours. Limited to graduate science students. Open to qualified undergraduate biological and physical sciences students with consent of instructor. Current and classic problems in paleobiology, with emphasis on interdisciplinary problems involving as-
pects of biology, geology, organic geochemistry, and cosmolology. Content varies from year to year. May be repeated for credit. S/U or letter grading.

221. Field Geology. (4) Lecture, one hour; discussion, one hour; field work, 10 days. Enforced requisite: course 120A, 120B, or equivalent. Introduction to geologic mapping projects at professional level. Resolution of problems in Southern California geology from synthesis of new and published research. Field area varies from year to year. May be repeated for credit. S/U or letter grading.

222. Introduction to Seismology. (4) Lecture, three hours. Types of seismic waves; travel-time seismology; epicenter location; amplitude variations; seismograms; multiphase records; three hours. Requisite: one course 221A-B. Elementary principles of hypocentral analysis, surface wave analysis; microseisms and tsunamis. S/U or letter grading.


225. Physics and Chemistry of Planetary Interiors. (4) (Formerly numbered 225A) Lecture, four hours. Chemical compositions of Earth and planets; high-pressure experiments; phase transformation and equations of state; variations of density and temperature with depth; thermal and compositional evolution. S/U or letter grading.

C226. Advanced Petrology. (4) Lecture, three hours; laboratory, three hours. Requisite: Laboratory course 103A. Designated for graduate students. Understanding the processes that create the Earth. Calculations of average chemical composition from available mineral chemistry. Distribution of minerals and their processes. Short papers. S/U or letter grading.

M229. Planetary Atmospheres and Climates. (4) (Formerly numbered 229.) (Same as Atmospheric and Oceanic Sciences M210.) Lecture, three hours. Enforced requisite: Physics 1C. Planetary atmospheric structure and composition, radiative transfer, and climate dynamics. Topics include origin and evolution of atmospheres, paleoclimate of Earth and Mars, atmospheric thermodynamics, plane-parallel radiation transfer, climate dynamics, climate forcings/feedbacks, bifurcation, and climate hysteresis. S/U or letter grading.

230. X-Ray Crystallography. (4) Lecture, three hours; laboratory, three hours. Requisite: course 221A. X-ray crystallography, course 221X. X-ray diffraction, reciprocal space groups, unit cell determination, space group, translation, and space group symmetry. Fourier techniques, X-ray diffraction, strain. S/U or letter grading.

231. Crystal Chemistry and Structure of Minerals. (4) Lecture, three hours; laboratory, three hours. Requisite: course 251. Bonding, interatomic configurations, polymorphic transformations, isomorphism, thermal and electrical properties, survey of structures of common minerals, and relation of physical and chemical properties to crystal structure. S/U or letter grading.


234. Petrologic Phase Equilibria. (4) Lecture, three hours; discussion, three hours. Requisites: course 51, Chemistry 110B. Principles governing homogeneous and heterogeneous equilibria, with selected applications to mineral stability relations in igneous and metamorphic rocks in light of observation, theory, and experiment. Geothermal reactions, petrographic evidence, metamorphic zoning, thermodynamic modeling, pressure and temperature effects, phase transitions, phase diagrams of minerals. S/U or letter grading.

235A-235B-235C. Current Research in Geochemistry. (1-1-1) Seminar, one hour. Limited to graduate students in Earth, planetary, and space sciences. May be repeated for credit. S/U grading.


240. Space Plasma Physics. (4) Lecture, three hours. Requisite: course 200C or Physics 210A. Physics of plasmas in space, including treatments based on magnetohydrodynamics and kinetic theory. Application to solar or planetary winds, steady-state magnetic field, magnetopause, osmotic, magnetic, electron processes, magnetic merging, field-aligned currents and magnetosphere/onsosphere coupling, ring current dynamics, and wave particle instabilities. S/U or letter grading.


242. Sandstone Petrology. (4) Lecture, two hours; laboratory, four hours. Requisite or corequisite: course 221B. Magmatic rocks and processes with emphasis on provenance, petrofacies, and petrologic reconstructions. S/U or letter grading.


248. Advanced Structural Geology. (4) Lecture, three hours; discussion, two hours. Requisite: course 111. Principles governing fracture, folding, and flow of rocks; solutions of structural problems at various scales; regional tectonic problems. S/U or letter grading.

251. Seminar: Mineralogy. (4) Seminar, three hours. Examination of groups of rock-forming minerals (e.g., feldspars), integrating such aspects as crystal structure, crystal chemistry, phase equilibria, and petrogenesis. S/U or letter grading.

252. Seminar: Geochemistry. (4) Seminar, two hours; discussion, two hours. Phases equilibria under crustal conditions, chemistry of ocean waters, recent and ancient sediments, structure and chemistry of upper mantle, geochronology, cosmochronology, and cosmochemistry. S/U or letter grading.

253. Seminar: Petrology. (4) Seminar, three hours. Problems of igneous or metamorphic petrology: methods of evaluating physical conditions of metamorphism; diffusion in minerals, the role of melt in ultramafic rocks and problems of mantle; element fractionation among coexisting phases; other current subjects in field. S/U or letter grading.

255. Seminar: Structural Geology and Tectonics. (4) Seminar, two hours; discussion, two hours. Requirements: course 244. Basin evolution and paleogeography, with emphasis on Phanerozoic of Western U.S. S/U or letter grading.

C260. Field Seminar. (2 to 6) Seminar, three hours; discussion, one hour; field work, five to 20 days. Requisite: course 61. Field-based seminars. Topics vary, subject to change. May be repeated for credit. Concurrently scheduled with course C160. S/U or letter grading.

261. Topics in Magnetospheric Plasma Physics. (4) Lecture, four hours. Lectures, discussions, and ex- ercises on specific advanced topics in magnetospheric plasma physics. Previous courses examined magnetic storms, magnetospheric substorms, ultralow frequency waves, and adiabatic particle motion in Earth’s radiation belts. S/U or letter grading.


264. Order of Magnitude Earth and Planetary Sciences. (4) Seminar, three hours; discussion, three hours. Limited to departmental graduate students. Many graduate students have had little practice in making rough estimates or order of magnitude (OOM) assessments of physical problems, and even less practice at taking through problems with others. One key problem is tendency for rote memorization to take precedence over understanding. Discussion of basic problems from OOM perspective, with focus on problem solving and presentation of Earth and planetary sci- ences, to inculcate physically based reasoning and promote effective on-your-feet communication. Attendance at departmental colloquium required each weekday. S/U or letter grading.

265. Instrumentation, Data Processing, and Data Analysis in Space Physics. (4) Lecture, three hours. Principles, testing, and operations of magnetometers and other instruments. Data processing, display, and archiving. Time-series analysis techniques, including Fourier series, eigenanalysis, and power spectra. S/U or letter grading.

M270A-M270B-M270C. Seminars: Climate Dynamics. (4 hours each) (Same as: Atmospheric and Oceanic Sciences M272A-M272B-M272C and Geography M270A-M270B-M270C.) Seminar, two hours. Archaeo- logical, geophysical, micropaleontological, and
stratigraphic evidence for climate change throughout geological past. Rheology and dynamics of climatic subsystems: atmosphere and oceans, ice sheets and marine ice, lithosphere and mantle. Climate of other planets. Modeling, simulation, and prediction of modern climate on monthly, seasonal, and interannual time scale. May be repeated for credit. S/U or letter grading.

CM273. Earth Process and Evolutionary History. (4) (Same as Ecology and Evolutionary Biology CM268.) Lecture, three hours; discussion, one hour; laboratory, two hours. Enforced requisites: Chemistry 14A, 14B (or 20A, 20B), Life Sciences 1, 2, 3, 4, 5. Recommended: one course from Atmospheric, Biochemical, Geometric, M100, 101, 102, 103, 105, Ecology and Evolutionary Biology 109, 116, 120, 121, 122, M131, 135, 142, 152, 154, Geography 100, 101, or 103. Exploration of relationship between physical processes affecting surface of Earth, such as tectonics and climate, and biological evolution. Geologic history of Earth from its formation and history of scientific advancement. Changes through time in Earth/atmosphere/ocean system discussed in terms of their effects on biological process and biodiversity. Climate issues considered in this historical context of global processes. Emphasis on geologic climate change placed in context of geologic record of climate change. Concurrently scheduled with course CM173. S/U or letter grading.

C279. Search for Extraterrestrial Intelligence: Theory and Application. (4) (Same as Computer Science 108A, 108B.) Lecture, two hours; laboratory, two hours. Enforced requisites: Mathematics 31B, Physics 1B. Recommended: course 71, Computer Science 31, Physics 110B, Program in Computing 10A. Search for extraterrestrial intelligence (SETI) is based on number of astronomical, mathematical, statistical, and computational principles. Coverage of fundamental concepts in these disciplines. Issues of context of SETI: abundance and architecture of extrasolar planetary systems; radio astronomy, including wave propagation and dispersion; signal processing, including sampling theory and Fourier transforms; random processes, including Gaussian and Poisson statistics, and algorithm development. Design of observational program, acquisition of telescopic data, development of algorithms to analyze data, and writing of report on results. Concurrently scheduled with course C179. S/U or letter grading.

282. Seminar: Geophysics. (4) Seminar, two hours; discussion, two hours. Seismology, geophysical prospecting, electromagnetic prospecting. Selected topics. Preparation: one hour; laboratory, two hours. May be repeated for credit. S/U or letter grading.

M285. Origin and Evolution of Solar System. (4) (Same as Astronomy M285.) Lecture, four hours. Dynamical problems of solar system; chemical evidence from geochemistry, meteorites, and solar atmosphere; nucleosynthesis; solar origin, evolution, and termination; solar nebula, hydromagnetic processes, formation of planets and satellite systems. Content varies from year to year. May be repeated for credit. S/U grading.


289. Seminar: Fluid Dynamics. (2) Seminar, one to two hours. Problems of current interest in fluid dynamics, with emphasis on geophysical applications. May be repeated for credit. S/U grading.


295A-295B-295C. Current Research in Earth, Planetary, and Space Sciences. (1-1-1) Lecture, one hour. Limited to graduate Earth, planetary, and space sciences students. Seminars presented by outside speakers, staff, and/or graduate students describing current research. Written reports required. May be repeated for credit. S/U grading.

C296. Research Topics in Earth, Planetary, and Space Sciences. (1) Research group meeting, one to three hours. Designed for departmental students participating in research group. Discussion of current research and literature in research specialty of faculty member teaching course. May be repeated for credit. Concurrently scheduled with course C194. S/U grading.


298. Advanced Topics in Earth and Space Sciences. (2 to 4) Lecture, two to four hours. S/U or letter grading.

M370A. Integrated Science Instruction Methods. (4) (Same as Chemistry M370A and Physics M370A.) Lecture, two hours; discussion, one hour; laboratory, one hour. Preparation: one introductory lower-division year (including laboratory) each of chemistry, life sciences, and physics and at least two Earth science courses, preferably one with field experience. Classroom management, lesson design, assessment, history of science education, S/U or letter grading.

M370B. Integrated Science Instruction Methods. (4) (Same as Chemistry M370B and Physics M370B.) Lecture, two hours; discussion, one hour; laboratory, one hour. Preparation: course M370A or Chemistry M370A or Physics M370A. Application of learning theory to science instruction and classroom management, including use of technology, collaborative learning, laboratory safety, ethical issues, field experiences, and professional development. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Teaching Earth, Planetary, and Space Sciences. (1) Seminar, one hour; discussion, two hours.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate advisor and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Directed Individual Study and/or Research. (2 to 12) Tutorial, to be arranged. May be repeated. S/U or letter grading.

597. Preparation for MS Comprehensive Examination or PhD Qualifying Examinations. (2 to 8) Tutorial, to be arranged. S/U grading.

598. MS Research and Thesis Preparation. (2 to 12) Tutorial, to be arranged. May be repeated. S/U grading.


Scope and Objectives
The Master of Arts degree in East Asian Studies offers an interdisciplinary and highly flexible program of study. With opportunities to take a range of advanced courses in the social sciences and humanities, students are able to tailor their programs to emphasize particular methodological and disciplinary approaches and to focus in depth on the region as a whole and on its dynamics in particular countries. Coursework and language offerings range from the ancient to the contemporary and allow students to prepare for a broad range of individual needs and career interests with a thorough grounding in the history and culture of the region.

Information on the undergraduate major in Asian Studies can be found in the International and Area Studies section of this catalog.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degree
The East Asian Studies Program offers the Master of Arts (MA) degree in East Asian Studies.
East Asian Studies

Graduate Courses

291A–291B. Variable Topics in East Asian Studies. (4–4) Seminar, three hours. Selected topics on East Asia. May be repeated for credit with topic change. S/U or letter grading.

ECOLOGY AND EVOLUTIONARY BIOLOGY

College of Letters and Science

101 Hershey Hall
Box 957426
Los Angeles, CA 90095-7246
310-825-1959, Graduate Office
eebgrad@eeb.ucla.edu
310-825-1680, Undergraduate Office
eebundergrad@lifesci.ucla.edu
https://www.eeb.ucla.edu

Peter N. Nonacs, PhD, Interim Chair
Blaire Van Valkenburgh, PhD, Co-Chair

Professors

Michael E. Alfaro, PhD
Priyanga A. Amarasekare, PhD
Paul H. Barber, PhD
Daniel T. Blumstein, PhD
Donald G. Buth, PhD
Peggy M. Fong, PhD
Malcolm S. Gordon, PhD
Patricia A. Govey, PhD
Gregory F. Grether, PhD
Stephen P. Hubbell, PhD
David K. Jacobs, PhD
Peter M. Kareiva, PhD
Glen M. MacDonald, PhD
Peter M. Narins, PhD
Peter N. Nonacs, PhD
Lawren Sack, PhD
Barnett A. Schlinger, PhD
H. Bradley Shaffer, PhD
Thomas B. Smith, PhD
Victoria L. Sork, PhD
Blaire Van Valkenburgh, PhD (Donald R. Dickey Professor of Vertebrate Evolution)
Robert K. Wayne, PhD
Cheryl Ann Zimmer, PhD
Richard K. Zimmer, PhD

Professors Emeriti

AA Barber, PhD
Clifford F. Brunk, PhD
Joseph Casacarno, PhD
Martin L. Cody, PhD
Nicholas E. Collias, PhD
Franz Engelmann, PhD
Arthur C. Gibson, PhD
Elma Gonzalez, PhD
William M. Hamner, PhD
Henry A. Hespenheide, PhD
J. Lee Kavanau, PhD
James O. Lloyd-Smith, PhD
Kenneth A. Nagy, PhD
Park S. Nobel, PhD
Philip W. Rundel, PhD
Van M. Savage, PhD
Richard W. Siegel, PhD
Charles E. Taylor, PhD
Henry J. Thompson, PhD
Richard R. Vance, PhD
Peter P. Vaughn, PhD
Eduardo Zeiger, PhD

Associate Professor

Nathan J.B. Kraft, PhD

Assistant Professors

Kirk E. Lohmueller, PhD
Noa Pinter-Wollman, PhD
Pamela J. Yeh, PhD

Adjunct Professors

Carlos L. de la Rosa, PhD
Jon E. Keeley, PhD
Barbara J. Natterson, MD

Adjunct Associate Professors

Seth D. Riley, PhD
Xiaoming Wang, PhD

Adjunct Assistant Professors

Cheryly A. Brigham, PhD
Brenda J. Larison, PhD
Jonathan D. Marcol, PhD
Debra M. Shier, PhD

Scope and Objectives

Organismic biology touches every aspect of modern life, and understanding how living organisms are adapted to their environments is the major challenge of the discipline. To meet this challenge, the Department of Ecology and Evolutionary Biology offers undergraduate and graduate instruction at all levels of biology—from regulatory and physiological processes within organisms through the natural ecology and behavior of living organisms and to the population and community dynamics of multiple species. All of these subject areas address practical problems facing the world today, and all influence human decisions on matters ranging from conservation of the environment to advancement of medical science.

The Bachelor of Science degrees combine essential background studies in mathematics, chemistry, and physics with a general introduction to all of the biological subjects, as well as advanced in-depth exposure to some of them. The Master of Science and PhD degrees provide opportunities for advanced, concentrated study. The Master of Science degree requires, in addition to specified coursework, completion of either a comprehensive examination or the performance of original research culminating in a thesis. The PhD degree requires independent and innovative research that ultimately results in a dissertation.

Undergraduate Study

Students may earn a Bachelor of Science degree in one of three different majors within the department: Biology (general biology); Ecology, Behavior, and Evolution; and Marine Biology. The majors build on similar lower-division introductory courses and differ primarily in the upper-division requirements. The Biology major is designed for students who desire exposure to a wide range of biological subjects. The remaining two majors—Ecology, Behavior, and Evolution and Marine Biology—provide more specialized instruction and strong preparation for employment or subsequent graduate study in the respective disciplines.

Two of the majors offered in the department are designated capstone majors: Ecology, Behavior, and Evolution and Marine Biology. In both programs students apply theory and technique learned through four years of classroom and laboratory experience to their own independent projects. The main purpose of the capstone is to provide a unique field experience that involves designing and executing a research project. Students are aided in the scientific process of learning about a new ecosystem, developing relevant questions, designing conceptually based projects, troubleshooting and completing the work, and writing a publication-ready manuscript. They are also expected to exhibit strong teamwork, problem-solving, and communication skills.

Biology BS

The Biology major is designed for students with a broad interest in biology who desire to pursue careers in a wide range of biological and related fields. It provides students with excellent background preparation for postgraduate training in medicine and other health sciences, in tracks leading to academic and public service careers in biology, in biological industries, and even in nonbiological careers such as business, agriculture, and law. Emphasis is on breadth of training to expose students to all levels of modern biology.

Preparation for the Major

Life Sciences Core Curriculum


Students must also complete one of two life sciences sequences—either Life Sciences 1, 2, 3, 4, and 23L OR 7A, 7B, 7C, and 23L. They may not substitute courses in either sequence. Each core curriculum course must be passed with a grade of C– or better, and all courses must be completed with an overall grade-point average of 2.0 or better. Students receiving a grade below C– in two core curriculum courses, either in separate courses or repetitions of the same course, are subject to dismissal from the major.

Transfer Students

Transfer applicants to the Biology major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of general biology with laboratory for majors, preferably equivalent to Life Sciences 1 and 2 OR 7A, 7B, and 7C, one year of calculus, one year of general chemistry with laboratory for majors, and one semester of organic chemistry with laboratory. A second semester of organic chemistry or one year of calculus-based physics is strongly recommended but not required for admission.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Students must complete the following courses:

1. Chemistry and Biochemistry 153A
2. At least 8 units (two courses) from Ecology and Evolutionary Biology 100, 109, 116,
120 or 185, 121. Students with credit for course 120 cannot also take course 185

3. At least 8 laboratory units (two courses) from Ecology and Evolutionary Biology 100L, 101, 103, 105, 109L, 110, 111, 112, 115A, 114A, 115, 117, 128, 136, 162L, 170, C174, 181. For courses 100L, 109L, and 162L to be applied, the corresponding lecture course must be completed. Four units from the Field Biology Quarter or Marine Biology Quarter may be applied, and one course from Molecular, Cell, and Developmental Biology C150/150AL or Physiological Science 166 may be included. Students with credit for Ecology and Evolutionary Biology 170 cannot also take Physiological Science 166

4. At least 8 physiology units (one course) from Ecology and Evolutionary Biology 101, 103, 105, 107, 109, 110, 111, 112, 113A, 114A, 115, 116, 117, C119A, C119B, 120, 121, 122, C126, M127 (or Environment M127 or Geography M127), 128, 129, 130, M131 (or Geography M117), 133, C135, 136, 137, M139 (or Atmospheric and Oceanic Sciences M105), 142, M145 (or Earth, Planetary, and Space Sciences M118), 151A, 152, 153, 154, 156, 160, 162, 170, C172, CM173 (or Earth, Planetary, and Space Sciences CM173), C174, 175, 176 (counts as one-half course), M178 (or Bioengineering CM186 or Computational and Systems Biology M186 or Computer Science CM186), C179, 180A (counts as one-half course), 180B, 185, 186, 187, 198A and 198B (must take both), 199 (4 units), Life Sciences 107 (students with credit for Life Sciences 4 cannot take Life Sciences 107), Molecular, Cell, and Developmental Biology 138, 165A. Eight units from the Field Biology Quarter or Marine Biology Quarter may be included, and any departmental course not applied under item 2 or 3 above may be applied in this category. Students with credit for Ecology and Evolutionary Biology 120 cannot also take course 185

5. At least 12 units (three courses) from Anthropology 120 and/or one course from 124P, 124S, or 128P; Atmospheric and Oceanic Sciences M105 (or Ecology and Evolutionary Biology M139) or one course from 102, 103, 104, or 130; Biostatistics 100B, chemistry (except Chemistry and Biochemistry 188SA through 199); Chemistry and Biochemistry 153L is strongly recommended; Earth, Planetary, and Space Sciences 116, ecology and evolution biology (except Ecology and Evolutionary Biology 188SA through 196), Geography 112 and/or one course from 108 or 111, Human Genetics C144 or one course from Biomedical Research 100A, 100HB, or 100HC, Life Sciences 107 (students with credit for Life Sciences 4 cannot take Life Sciences 107), mathematics (except Mathematics 105A, 105B, 105C, 106, 188SA through 199), microbiology, immunology, and molecular genetics (except Microbiology, Immunology, and Molecular Genetics 188SA through 199), molecular, cell, and developmental biology (except Molecular, Cell, and Developmental Biology 190A through 199D, Neuroscience 101A (or Molecular, Cell, and Developmental Biology M175A or Physiological Science M100A or Psychology M117A), M101B (or Molecular, Cell, and Developmental Biology M175B or Physiological Science M100B or Psychology M117B), M101C (or Molecular, Cell, and Developmental Biology M175C or Physiological Science M101C or Psychology M117C), 102, M130 (or Molecular, Cell, and Developmental Biology M181 or Physiological Science M181 or Psychiatry M181 or Psychology M117J), physics (except Physics 188SA through 199), physiological science (except Physiological Science 188SA through 199), Psychology 115. Any remaining units from the Field Biology Quarter or Marine Biology Quarter not applied in item 3 or 4 may be applied and any course not applied under item 2, 3, or 4 above may be included in this category.

A maximum of 8 units of the Ecology and Evolutionary Biology 198 series or 4 units of Ecology and Evolutionary Biology 199 may be applied toward the major. Credit for 199 courses from other departments may not be applied. With consent of the instructors and department, students may enroll in 200-level courses and apply them toward major requirements.

Each course applied toward requirements for preparation for the major and the major must be taken for a letter grade. Biology majors must earn a C– or better in each course taken as preparation for the major, and at least a 2.0 (C) overall average in all courses applied toward the major.

Ecology, Behavior, and Evolution BS

Capstone Major

The Ecology, Behavior, and Evolution major is appropriate for students preparing for graduate study in ecology, behavior, and evolution or for employment in areas such as environmental biology, animal behavior, conservation, teaching, museum work, and governmental positions dealing with environmental issues of wide importance and impact. A strong field component involving study in terrestrial and marine locales such as coastal, desert, and mountain environments in California and the Southwest and in the Neotropics is required.

Preparation for the Major

Ecology Sciences Core Curriculum


Students must also complete one of two life sciences sequences—either Life Sciences 1, 2, 3, 4, and 23L OR 7A, 7B, 7C, and 23L. They may not substitute courses in either sequence. Each core curriculum course must be passed with a grade of C– or better, and all courses must be completed with an overall grade-point average of 2.0 or better. Students receiving a grade below C– in two core curriculum courses, either in separate courses or repetitions of the same course, are subject to dismissal from the major.

Transfer Students

Transfer applicants to the Ecology, Behavior, and Evolution major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of general biology with laboratory for majors, preferably equivalent to Life Sciences 1 and 2 OR 7A, 7B, and 7C, one year of calculus, one year of general chemistry with laboratory for majors, and one semester of organic chemistry or one year of calculus-based physics is strongly recommended but not required for admission.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Students must complete the following courses:

1. At least 4 morphology and systematics units (one course) from Ecology and Evolutionary Biology 101, 103, 105, 110, 111, 112, 113A, 114A, 115, 117, or 130

2. At least 4 physiology units (one course) from Ecology and Evolutionary Biology 162, 162L, 170, or Physiological Science 166. Students with credit for Ecology and Evolutionary Biology 170 cannot also take Physiological Science 166

3. At least 12 ecology, behavior, and evolution units (three courses) from Anthropology 128A, Ecology and Evolutionary Biology 100, 116, C119A, C119B, 120, 121, 122, C126, 128, 129, 130, 133, C135, 136, 137, 142, 151A, 152, 153, 154, 155, 156, CM173, (or Earth, Planetary, and Space Sciences CM173), 174, 175, 176 (counts as one-half course), M178 (or Bioengineering CM186 or Computational and Systems Biology M186 or Computer Science CM186), C179, 180A (counts as one-half course), 180B, 185, 186, 187, 198A and 198B (must take both), 199 (4 units), Life Sciences 107 (students with credit for Life Sciences 4 cannot take Life Sciences 107), Molecular, Cell, and Developmental Biology 138, 165A. Eight units from the Field Biology Quarter or Marine Biology Quarter may be included, and any departmental course not applied under item 2 or 3 above may be applied in this category. Students with credit for Ecology and Evolutionary Biology 120 cannot also take course 185

4. One capstone field quarter consisting of 12 to 16 units from the Field Biology Quarter (FBQ), Marine Biology Quarter (MBQ), or preapproved equivalent (see undergraduate adviser)

5. At least 8 units (two courses) from Anthropology 128P; chemistry (except Chemistry and Biochemistry 190A through 199D, Chemistry and Biochemistry 153A and 153L are strongly recommended), Earth, planetary, and space sciences (geology only; except Earth, Planetary, and Space Sciences 188 through 199), ecology and geology.
evolutionary biology (except Ecology and Evolutionary Biology 188SA through 196), geography (except Geography 188SA through 199), Life Sciences 107 (students with credit for Life Sciences 4 cannot take Life Sciences 107), mathematics (except Mathematics 105A, 105B, 105C, 106, 188SA through 199), microbiology, immunology, and molecular genetics (except Microbiology, Immunology, and Molecular Genetics 193A through 199), Molecular, Cell, and Developmental Biology 172, physics (except Physics 188SA through 199); recommended: taxon-oriented courses in ecological, behavioral, and evolutionary processes such as Ecology and Evolutionary Biology 111, 112, 113A, 114A, 115

Credit for 199 courses from other departments may not be applied.

Courses offered as part of the Field Biology Quarter (FBQ) are open to all qualified students, but strict priority is given to students who are Ecology, Behavior, and Evolution majors, are graduating seniors, have taken a broad range of ecology, behavior, and evolution coursework, and have maintained a good grade-point average.

With consent of the instructors and department, students may enroll in 200-level courses and apply them toward major requirements.

Each course applied toward requirements for preparation for the major and the minor must be taken for a letter grade. Ecology, Behavior, and Evolution majors must earn a C– or better in each course taken as preparation for the major, and at least a 2.0 (C) overall average in all courses applied toward the major.

As requisites for the Marine Biology Quarter, students must have a 3.0 overall grade-point average and have taken Statistics 13 or equivalent. Preference for the Marine Biology Quarter is given to Ecology, Behavior, and Evolution and Marine Biology majors. It is strongly recommended that students complete Ecology and Evolutionary Biology 109 and 109L prior to applying for the Marine Biology Quarter. Contact the Undergraduate Advising Office for all requirements for the Marine and Field Biology Quarters.

### Marine Biology BS

#### Capstone Major

The Marine Biology major is designed for students who wish to specialize in the area of marine sciences. Completion of this major provides students with both an excellent background in biology and specialization in various disciplines such as oceanography, subtidal and intertidal ecology, and physiology of marine organisms. Graduates are well prepared for postgraduate opportunities in the marine sciences, many other areas of biology, and medicine. The major provides valuable field experience with concomitant individual research opportunities in marine biology.

### Preparation for the Major

#### Life Sciences Core Curriculum

**Required:** Atmospheric and Oceanic Sciences 1 or Earth, Planetary, and Space Sciences 15; Chemistry and Biochemistry 14A, 14B, 14BL, 14C, and 14D, or 20A, 20B, 20L, 30A, 30AL, and 30B; Mathematics 3A, 3B, 3C, and Statistics 13, or Mathematics 31A, 31B, 32A, and Statistics 13, or Life Sciences 30A, 30B, and Statistics 13; Physics 1A, 1B, 1C, 4AL, and 4BL, or 5A, 5B, and 5C.

Students must also complete one of two life sciences sequences—either Life Sciences 1, 2, 3, 4, and 23L OR 7A, 7B, 7C, and 23L. They may not substitute courses in either sequence.

Each core curriculum course must be passed with a grade of C– or better, and all courses must be completed with an overall grade-point average of 2.0 or better. Students receiving a grade below C– in two core curriculum courses, either in separate courses or repetitions of the same course, are subject to dismissal from the major.

#### Transfer Students

Transfer applicants to the Marine Biology major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of general biology with laboratory for majors, preferably equivalent to Life Sciences 1 and 2 OR 7A, 7B, and 7C, one year of calculus, one year of general chemistry with laboratory for majors, and one semester of organic chemistry with laboratory. A second semester of organic chemistry or one year of calculus-based physics is strongly recommended but not required for admission.

Refer to the [UCLA Transfer Admission Guide](#) for up-to-date information regarding transfer selection for admission.

### The Major

Students must complete the following courses:

1. Ecology and Evolutionary Biology 109 and 109L
2. At least 4 laboratory units (one course) from Ecology and Evolutionary Biology 101, 105, 110, 112, 136, 170, or 181
3. At least 4 marine organismic biology or physiology units (one course) from Ecology and Evolutionary Biology 101 (unless taken under item 2), 105 (unless taken under item 2), 107, 112, 128, 142, 170 (unless taken under item 2), C174, or Physiological Science 166. Students with credit for Ecology and Evolutionary Biology 170 cannot also take Physiological Science 166
4. At least 4 ecology and behavior units (one course) from Anthropology 128P, Ecology and Evolutionary Biology 100, 116, C119A, 122, C126, 128, 129, M131 (or Geography M117), 133, 136, 137, 142, 151A, 152, 154, 155, 162, 170, C172, or M178 (or Bioengineering CM186 or Computational and Systems Biology M186 or Computer Science CM186)
5. At least 4 evolution units (one course) from Ecology and Evolutionary Biology, 116, 120, 121, 130, 133, C135, CM173 (or Earth, Planetary, and Space Sciences CM173), C174, 175, 185, 186, 186, or Life Sciences 107 (students with credit for Life Sciences 4 cannot take Life Sciences 107). Students with credit for Ecology and Evolutionary Biology 120 cannot also take course 185

6. One capstone field quarter consisting of 12 to 16 units from the Marine Biology Quarter (MBQ) or preapproved equivalent (see undergraduate adviser)

7. One additional physical, chemical, or geological oceanography course from Atmospheric and Ocean Sciences 102, 103, 104, M108 (or Ecology and Evolutionary Biology M139), 130, Chemistry and Biochemistry 103, 153A, Earth, Planetary, and Space Sciences 100, 116, 119, C141, 153, Ecology and Evolutionary Biology M131 (or Geography M117), 153, 198B, 199, Geography 100, 101, M106 (or Atmospheric and Oceanic Sciences M106), 123, 130, 169, Mechanical and Aerospace Engineering 103, or 150A, Molecular, Cell, and Developmental Biology 172

Credit for 199 courses from other departments may not be applied.

With consent of the instructors and department, students may enroll in 200-level courses and apply them toward major requirements.

Each course applied toward requirements for preparation for the major and the minor must be taken for a letter grade. Marine Biology majors must earn a C– or better in each course taken as preparation for the major, and at least a 2.0 (C) overall average in all courses applied toward the major.

As requisites for the Marine Biology Quarter, students must have a 3.0 overall grade-point average and have taken Statistics 13 or equivalent. Preference for the Marine Biology Quarter is given to Ecology, Behavior, and Evolution and Marine Biology majors. Students must complete Ecology and Evolutionary Biology 109 and 109L prior to participating in the Marine Biology Quarter. Contact the Undergraduate Advising Office for all requirements for the Marine and Field Biology Quarters.

### Field Biology

The department offers two quarter-long programs of advanced courses in field biology: the Field Biology Quarter (FBQ) and the Marine Biology Quarter (MBQ). These programs focus on the biology of organisms living in their natural environments, emphasize independent student research projects, and take place at field sites away from the UCLA campus. The course composition varies somewhat from year to year, but each program always carries 16 units of course credit. The Field Biology Quarter involves some combination of Ecology and Evolutionary Biology 103, 113B, 114B, 115, 118, 124A, 124B, 125, C126, 132, 134B, and 151B. The Marine Biology Quarter includes some combination of Ecology and Evolutionary Biology 102, 106, 129A, 129B, 147, 148, 163, 164,
165, and 182. The Field and Marine Biology Quarters may occur during fall, winter, or spring quarter, depending on location and faculty participation. To participate, students must enroll in all courses in the respective program. Participants in both programs are selected by personal interview. Information and applications are available in the Undergraduate Advising Office.

Honors Program
An overall grade-point average of 3.4 and a 3.4 in the major are required for graduation with honors. Highest honors are awarded to majors who have a GPA of 3.6 overall and a 3.6 in the major at graduation and who have successfully completed Ecology and Evolutionary Biology 198A and 198B.

Computing Specialization
Majors in Biology, Ecology, Behavior, and Evolution, and Marine Biology may select a specialization in Computing by (1) satisfying all the requirements for a bachelor’s degree in the specified major, (2) completing Program in Computing 10A, 10B, 10C, 30, and 60, and (3) completing one course from Computer Science CM186, Psychology 186A, or 186B. A grade of C– or better is required in each course, with a combined grade-point average in the specialization of at least 2.0. Students must petition for admission to the program and are advised to do so after completing Program in Computing 10B (petitions should be filed in the Undergraduate Advising Office). Students graduate with a bachelor’s degree in their major and a specialization in Computing.

Conservation Biology Minor
The Conservation Biology minor is designed for students who wish to augment their major program of study with courses addressing issues central to the conservation and sustainability of biodiversity and natural ecosystem processes. The minor seeks to provide students with a greater depth of experience and understanding of the role that science can play in developing conservation policy.

To enter the minor, students must (1) be in good academic standing (2.0 grade-point average or better), (2) have completed Life Sciences 1, Ecology and Evolutionary Biology 100, and 116 (or Environment 121) with minimum grades of C or better, and (3) submit a petition by e-mail to the Undergraduate Advising Office. All degree requirements, including the specific requirements for this minor, must be fulfilled within the unit maximum set forth by the College of Letters and Science.

Non-life sciences majors wishing to minor in Conservation Biology should be aware that preparation courses in chemistry, life sciences, mathematics, and physics are requisites to some of the upper-division courses accepted for the minor.

Required Lower-Division Course: Life Sciences 1.

Required Upper-Division Courses (28 units minimum): Ecology and Evolutionary Biology 100, 116 (or Environment 121), and four to six courses (19 units minimum) from 100L, 101, 103, 105, 109, 111, 112, 114A, 114B, C119A, C119B, 122, M127 (or Environment M127 or Geography M127), 129, M131 (or Geography, M117), 151A, 152, 153, 154, 155, 162L, C174, 176, 180A, Geography 102, 104, M107 (or Environment M114), 113, M115 (or Environment M132 or Urban Planning M165), M131 (or Environment M130), 135. Courses completed as part of the Field Biology Quarter and Marine Biology Quarter may be applied if not taken to fulfill a field quarter requirement; consult with the undergraduate counselors for more information. A maximum of two upper-division Geography courses may be applied to the minor. A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor, and at least 16 units applied toward the minor must be taken in residence at UCLA. Transfer credit for any of the above is subject to departmental approval; consult with the undergraduate counselors before enrolling in any courses for the minor.

Each minor course must be taken for a letter grade, and students must have a minimum grade of C (2.0) in each and an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Evolutionary Medicine Minor
The Evolutionary Medicine minor is designed for students who wish to augment their major program of study with courses that combine the disciplines of ecology and evolutionary biology, anthropology, psychology, and zoology with medicine to create new paradigms for investigating and understanding disease. The minor provides students with a greater depth of experience and understanding of the integration of evolutionary biology and medical education.

To enter the minor, students must (1) be in good academic standing (2.0 grade-point average or better), (2) have completed Ecology and Evolutionary Biology 100, and 120 or 185 with minimum grades of C or better, and (3) submit a petition by e-mail to the Undergraduate Advising Office. All degree requirements, including the specific requirements for this minor, must be fulfilled within the unit maximum set forth by the College of Letters and Science.

Non-life sciences majors wishing to minor in Evolutionary Medicine should be aware that preparation courses in chemistry, life sciences, mathematics, and physics are requisites to some of the upper-division courses accepted for the minor.


Required Research Project or Internship (4 units minimum): Ecology and Evolutionary Biology 195 or 199 or a suitable research internship from another department.

Participation in the Annual Biology Research Symposium (Poster Session) sponsored by the department in spring quarter is highly recommended.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor, and at least 20 units applied toward the minor must be taken in residence at UCLA. Transfer credit for any of the above is subject to departmental approval; consult with the undergraduate counselors before enrolling in any courses for the minor.

Each minor course must be taken for a letter grade, and students must have a minimum grade of C (2.0) in each and an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of Ecology and Evolutionary Biology offers Master of Science (MS), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Biology.

Ecology and Evolutionary Biology
Lower-Division Courses
10. Plants and Civilization. (4) Lecture, three hours; demonstration, one hour. Designed for nonmajors. Origin of crop plants; man's role in development, distribution, and modification of food, fiber, medicinal, and other plants in relation to their natural history. P/NP or letter grading.
11. Biomedical Research Issues in Minority Communities. (5) Discussion, four hours. Limited to 30 students. Discussions and student presentations on biomedical research as it affects minority communities, with emphasis on methodology, design, consequences, and ethics of current research. Discussion leaders provide information on preparation and training for research careers. P/NP or letter grading.
12. Biodiversity and Extinction: Crisis and Conservation. (4) Lecture, three hours; discussion, one hour. Examination of ecological and evolutionary principles necessary to understand nature and importance of
worldwide environmental crisis. Research by students of specific conservation issues and presentation of results to classes. P/NP or letter grading.

13. Evolution of Life. (4) Lecture, three hours; discussion, one hour. Not open to life sciences majors. Limited to four students. Introduction to biology within framework of evolutionary theory. Relationships of evolutionary thought to other areas of knowledge and society. Natural selection and origin of variation examined in context of genetics, molecular biology, physiology, phylogeny, population dynamics, behavior, and ecology. Emphasis on critical role of historical processes. P/NP or letter grading.

17. Ecology for Everyone. (5) Lecture, three hours; discussion, two hours. Major challenges to be faced in this century. How to find interdisciplinary and collaborative solutions to world's worsening environmental problems (e.g., global climate change, biodiversity loss, deforestation, pollution, declining water resources). Environment and literacy to equip students to become leaders in growing green economy and to help forge solutions to current and future environmental crises that threaten natural resource base. P/NP or letter grading.

21. Field Biology. (4) Lecture, three hours; discussion, two hours, or field trips, three to four hours. Recommended preparation: Life Sciences 15. Not open for credit to students with credit for course 122 or 129. Introduction to natural history of Western North America, especially Southern California. Classification, distribution, and ecology of common plants and animals. Letter grading.

25. Living Ocean. (5) Lecture, three hours; laboratory, one hour; field trips, three to four days. Not open for credit to students with credit for Earth, Planetary, and Space Sciences 15. Physical and chemical processes that take place in oceans, with emphasis on their effects on organisms. P/NP or letter grading.

50. Desert Life. (4) Lecture, three hours; laboratory, two hours. Introduction to fundamental structural, physiological, and behavioral features of desert organisms. Development of techniques for desert research. Off-campus meetings. To apply this course to the Biology upper-division major laboratory requirement, the corresponding lecture course must be completed with a passing grade. Letter grading.

100L. Introduction to Ecology and Behavior Laboratory. (4) Laboratory, four hours. Required courses: 100 (may be taken concurrently). Introduction to research methods in ecology and behavior, resulting in independent research proposals and to gain understanding of scientific methods, critical evaluation of research papers, and development of scientific writing skills. Involves work outside and off-campus meetings. To apply this course to the Biology upper-division major laboratory requirement, the corresponding lecture course must be completed with a passing grade. Letter grading.

101. Marine Botany. (6) Lecture, four hours; laboratory, six hours; three to four field trips. Required: Life Sciences 1. Introduction to biology and ecology of marine plants, including algae, sea grasses, and mangroves, with focus on form and function of marine plants and their ecological role in different marine habitats and ecosystems. Letter grading.


103. Plant Diversity and Evolution. (5) Lecture, three hours; laboratory, three hours; field trip. Requi- site: Life Sciences 1, 122. Understanding the global tree of life, with emphasis on using phylogenetic perspective to examine major transitions in plant evolution, including evolution and diversification of land plants, vascular plants, seed plants, and currently ecologically dominant flowering plants. Introduction to phylogenetics, providing overview of theory and methodology for reconstructing and using phylogenetic trees to study organismal evolution. Exploration of 700 million years of plant evolution, with emphasis on morphological, functional, ecological, and biogeographical perspectives. Letter grading.

106. Experimental Marine Invertebrate Biology. (4 or 6) Lecture, two hours; laboratory, 12 hours. Required: courses 105, Physiological Science 166 (may be taken concurrently). Offered either as 4-unit quarter-long course or as 6-unit Marine Biology Quarter course. Advanced course of natural history, physiology, biochemistry of invertebrates, with emphasis on independent laboratory and field investigations. P/NP or letter grading.

107. Evolution, Development, and Function of Invertebrate Animals. (6) Lecture, three hours; labora- tory, three hours; three weekend field trips. Requisite: course 105 or completion of Marine Biology Quarter. Advanced invertebrate biology course exploring evolutionary relationship of various invertebrates and explanation of marine species, comparative development and developmental genetics of invertebrate form, and form and function as they relate to marine invertebrates. Letter grading.


109L. Introduction to Marine Science Laboratory. (4) Laboratory, three hours; four field trips. Requisites: course 109 (may be taken concurrently). Life Sciences 1. Introduction to marine environments and methods used to study them. Exploration of variety of concepts in marine science, ranging from oceanogra- phy to behavior, primary productivity, marine biodiversity, with emphasis on experimental design and scientific writing. To apply this course to the Biology upper-division major laboratory requirement, the corresponding lecture course must be completed with a passing grade. Letter grading.

110. Vertebrate Morphology. (6) Lecture, three hours; laboratory, five hours. Required: Life Sciences 1, 2, 3, 4, 23L. Study of vertebrate morphology, function, and evolution from viewpoint of comparative anatomy of adult forms, biomechanics, development, and paleontology. Laboratory study of selected vertebrates. Letter grading.

111. Biology of Vertebrates. (5) Lecture, three hours; laboratory, three hours; four to two-day field trips. Required: Life Sciences 1. Adaptations, behavior, and ecology of vertebrates. Letter grading.

112. Ichthyology. (6) Lecture, three hours; laboratory, six hours; field trips. Required: Life Sciences 1. Highly recommended: courses 110, 111. Biology of fresh- water and marine fishes, with emphasis on their evo- lution, systematics, morphology, zoogeography, and ecology. Field trips to examine anatomy of adult forms and estuarine, tidewater, and coastal streams. Letter grading.

113A. Herpetology. (5) Lecture, three hours; labora- tory, three hours; field trips, three and one half days per semester. Requisite: Life Sciences 1, 111. Offered either as 6-unit quarter course or as 4-unit Marine Biology Quarter course. Advanced course of natural history, physiology, biochemistry of invertebrates, with emphasis on independent laboratory and field investigations. P/NP or letter grading.

113B. Field Herpetology. (6) Required: Life Sciences 1. Recommended: courses 100, 111. Two weeks of off-campus research projects followed by two-week lecture course and offered only as part of Field Bi- ology Quarter. Biology, particularly ecology and behavior, of reptiles and amphibians in their natural habi- tat. Students carry out supervised research projects, they write up and orally present their results in sem- inar fashion. Letter grading.


114B. Field Ornithology. (6) Required: Life Sciences 1. Recommended: course 100. Two to three weeks of off-campus research projects followed by lecture course and offered only as part of Field Biology Quarter. Biology, particularly ecology and behavior of birds in their natural habitat. Letter grading.

Eco116. Conservation Biology. (4) Lecture, three hours; discussion, two hours. Requisite: Life Sciences 1. Recommended: course 100. Not open for credit to students with credit for Environ 121. Study of ecological and evolutionary principles as they apply to protected areas. Techniques of scientific research and conservation diversity. Discussion sections focus on interactions of science, policy, and economics in conserving biodiversity. Oral and written student presentation on specific conservation efforts. P/NP or letter grading.

Eco117. Evolution of Vertebrates. (5) Lecture, three hours; laboratory, three hours. Requisite: course 110. Recommended: one general zoology course. Fossil record and evolution of vertebrates, with emphasis on paleobiology and morphological character of tetrapods. P/NP or letter grading.

Eco118. Plant Adaptations. (8) Lecture, one hour; field trip, 10 hours. Requisite: course 100. Five-week course offered only as part of Field Biology Quarter. Field-oriented introduction to mechanisms by which vascular plants adapt themselves to their abiotic and biotic environments using community, population, and ecophysiological levels of integration. Letter grading.

C119A. Mathematical and Computational Modeling in Ecological Research. (4) Lecture, three hours; discussion, one hour. Enforced requisite: Life Sciences 30B or Mathematics 3A. Recommended: two of Life Sciences 100, 122, Life Sciences 1, Mathematics 3C. Introduction to modeling dynamics of ecological systems, including formulation and analysis of mathematical models used to understand principles of scientific programming, probability and stochastic modeling, and methods to relate models to data. Examples from ecology but techniques and principles applicable throughout life and physical sciences. Concurrently scheduled with course C219A. P/NP or letter grading.

C119B. Modeling in Ecological Research. (4) Lecture, two hours; discussion, two hours. Requisite: course C119A. Advanced techniques in mathematical and computational modeling of ecological dynamics and other population dynamics problems. Independent research projects developed by students. Topics include large-scale computer simulations using models to data, sensitivity analysis, presentation of model results, and other topics from current literature. Concurrently scheduled with course C219B. P/NP or letter grading.

Eco120. Evolution. (4) Lecture, three hours; discussion, two hours. Requisites: Life Sciences 1, 2, 3, 4, 23L, and Mathematics 3A and 3B (or 31A or Life Sciences 30B). Not open for credit to students with credit for course 120 or 121. Developmental departments specializing in environmental and population biology. Introduction to mechanics and processes of evolution, with emphasis on natural selection, population genetics, and evolution of regulatory rates, and patterns of adaptation. P/NP or letter grading.

Eco121. Molecular Evolution. (4) Lecture, three hours; discussion, one hour. Requisites: Life Sciences 3, 4, 23L. Molecular biology, with emphasis on evolutionary aspects. DNA replication, RNA transcription, protein synthesis, gene expression, and molecular evolution. Letter grading.

Eco122. Ecology. (4) Lecture, three hours; discussion, two hours. Requisite: course 100. Life Sciences 30B or Mathematics 3B. Highly recommended: Mathematics 31B, 32A. Designed for departmental majors specializing in environmental and population biology and community ecology, with emphasis on growth and distributions of populations, interactions between species, and structure, dynamics, and functions of communities. P/NP or letter grading.

Eco123A-123B. Field Marine Ecology. (4 or 8 each) Lecture, five hours; laboratory, 15 hours. Recommended requisites: courses 100, 122. Offered either as 4- or 8-unit five-week intensive course given off campus as part of Marine Biology Quarter. Survey of current topics in marine ecology, including analysis of primary research literature combined with field study of ecology of marine organisms, populations, communities, and ecosystems. Original research project required. Letter grading. Eco123A. In residence at research station located outside continental U.S. 123B. In residence at research station located within U.S., including Alaska and Hawaii.

Eco124A-124B. Field Ecology. (4 or 8 each) Lecture, five hours; laboratory or field trip, 15 hours. Enforced requisite: course 100. Offered as part of Field Biology Quarter. Field and laboratory research in ecology; collection, analysis, and write-up of numerical data, with emphasis on design and execution of field study. In residence at research station located outside continental U.S. for part of or for duration of term. 124B. In residence at research station located within U.S., including Alaska and Hawaii, for part of or for duration of term.

Eco125. Tropical Animal Communication. (4 or 8) Requisites: course 100, Life Sciences 1. Offered either as 4-unit-quarter-long course or as 8-unit Field Biology Quarter course. Four-unit course has lecture, three hours; discussion, two hours. Animal communication behavior, tropical vertebrate biology, and evolution of information processing systems. Eight-unit course covers same basic lecture material in five or six intensive weeks, followed by extended field trips where students do individual projects in animal communication. Letter grading.

Eco126. Behavioral Ecology. (4 or 8) (Formerly numbered 121) Requisites: courses C119A, C219A, Mathematics 3C or 32A or Life Sciences 30B. Recommended: course 129. Offered either as 4-unit-quarter-long course or as 8-unit Field Biology Quarter course. Eight-unit course covers several major areas more broadly, including foraging, selection and predator-prey interactions in five intensive weeks, followed by extended field trip where students do individual projects. Concurrently scheduled with course C242. Letter grading.

Eco127. Soils and Environment. (4) (Same as Environment M127 and Geography M127.) Lecture, three hours; discussion, two hours. Requisites: Life Sciences 1, 2, 3, 4, 23BL, and Mathematics 3C1 and 3B1 or Life Sciences 30B. Not open for credit to students with credit for course 127. Study of ecosystem and environmental implications: soil development, morphology, and worldwide distribution of soil orders; physical, chemical, hydrologic, and biologic properties, plant productivity, and pollution; management of soils as related to plant growth and distribution. P/NP or letter grading.

Eco128. Plant Physiological Ecology. (5) Lecture, three hours; laboratory, three hours; one-two day field trip. Requisites: Life Sciences 1, Physics 1C and 4BL, or 6C or 6CH. Study of plant/environment interactions under natural conditions. Transpiration and photosynthesis, leaf temperatures, and water movement in soil/plant/atmosphere continuum. Letter grading.

Eco129. Animal Behavior. (4) Lecture, three hours; discussion, two hours. Requisites: course 100, Life Sciences 1. Emphasis on behavior in the context of evolutionary principles, including foraging strategies, social competition, sexual selection, mating systems, cooperation, and social organization. Letter grading.

Eco130. Principles of Systematic Biology. (4) Lecture, three hours; discussion, one hour. Requisites: Life Sciences 1 Recommended: courses 120, 135. Concepts, principles, and methods of comparative biology as they apply to inference of evolutionary relationships among species, with emphasis on application of biologic and phylogenic processes. Letter grading.

Eco131. Ecosystem Ecology. (4) (Same as Geography M111.) Lecture, three hours; field trips. Enforced requisite: Geography 1 or Life Sciences 2. Designed for juniors/seniors. Development of principles of ecosystem ecology, with focus on understanding links between ecosystem structure and function. Emphasis on energy and water balances, nutrient cycling, plant-animal interactions, landscape heterogeneity, and human disturbance to ecosystems. P/NP or letter grading.

Eco132. Field Behavioral Ecology. (8) Lecture, two hours; laboratory/field trip, 10 hours. Requisites: Life Sciences 1, 100, 129. Offered as part of Field Biology Quarter. Field research in behavioral ecology, emphasizing animal communication. Design and execution of individual and small group field projects designed to answer behavioral questions. P/NP or letter grading.

Eco133. Elements of Theoretical and Computational Biology. (4) Lecture, three hours; discussion, one hour; laboratory, two hours. Requisites: Life Sciences 1, 130, 14A, 14B, 14BL, and Mathematics 3A and 3B, or 31A and 31B, or Life Sciences 30B. Strongly recommended: elementary statistics course. Introduction of basic core mathematical ideas and models necessary to understand contemporary ecology and evolutionary biology. Population ecology and growth, community ecology, population genetics, natural selection, P/NP or letter grading.

Eco134B. Field Physiological Ecology of Desert Animals. (8) Field course. Requisites: Life Sciences 1. Offered as part of Field Biology Quarter. Five-week course. Requisites: Life Sciences 1, 130, 14A, 14B, 14BL, and Mathematics 3A and 3B, or 31A and 31B, or Life Sciences 30B. Designed for departmental majors specializing in ecophysiological, behavioral, morphological, and ecological mechanisms of desert animals using to enhance their survival in arid habitats. Students carry out supervised research projects, which are written up and present their results in seminar fashion. Letter grading.


Eco136. Ecology, Behavior, and Evolution Laboratory. (6) Lecture, four hours; laboratory, eight hours; field trips, six and one half days per term. Requisites: course 100, Life Sciences 1, Mathematics 3C or 32A. Strongly recommended: courses 129 or 122. Designed for Ecology, Behavior, and Evolution majors. Laboratory and field exercises on population genetics, growth, and regulation; competition and predation; and behavioral interplay of diversity and distribution. Methodological aspects from theoretical models and computer simulations to laboratory and garden experiments to fieldwork. Mandatory field trips, including two weekend trips. Letter grading.

Eco137. Chemical Communication. (4) Lecture, three hours; discussion, one hour. Requisites: Chemistry 14A, 14B, 14BL, 14C, 14CL, and 14D, or 20A, 20B, 20L, 30A, 30AL, 30B, and 30BL, Life Sciences 1, 2, 3, 23L. Chemical signals are most important means by which organisms communicate. Exploration of how chemical signals are produced, transported, and influence behavior of microbes, plants, and animals. Symposium on signal transduction mechanisms to cell biology, physiology, and ecology. P/NP or letter grading.

Eco139. Introduction to Chemical Oceanography. (4) (Same as Atmospheric and Oceanic Sciences M105.) Lecture, three hours; discussion, one hour. Introductionductory course for physical sciences, life sciences, and engineering majors interested in oceanic environment. Chemical components of the marine environment of physical, chemical, and biological processes governing this composition in past and present. Cycles of carbon, nitrogen, phosphorus, silicon, and oxygen. Investigation of primary production, export production, remineralization, and nitrogen-oxygen exchange processes. Letter grading.

M145. Advanced Paleontology. (Same as Earth, Planetary, and Space Sciences 116) Lecture, three hours. Requisites: course 110 or 117 or Earth, Planetary, and Space Sciences 116. Consideration of major factors that have influenced history of life, including analytical tracing patterns in the fossil record, nature of rock record, and contribution of data from stable isotopes, functional morphology, phylogenetics, and developmental biology. P/NP or letter grading.

147. Biological Oceanography (4) Five-week intensive course. Lecture, five hours; laboratory, 15 hours. Requisites: Chemistry 14A, 14B, and 14BL or 20A, 20B, 20L, and 30AL, Life Sciences 1, 3, 23L. Lectures include physical, chemical, and biological factors affecting abundance and distribution of organisms in marine environment. Laboratory includes experimental studies of local marine organisms, with emphasis on organismal responses to primary production and nutrient flux. Letter grading.


151A. Tropical Ecology. (4) Lecture, one hour; discussion, three hours. Enforced requisite: Life Sciences 1. Broad introduction to biodiversity, community structure, and dynamics and ecosystem function of range of tropical forest habitats. Discussion of such themes as biogeography, forest structure, plant growth forms, animal communities, herbivory, forest dynamics, and disturbance regimes. P/NP or letter grading.

151B. Field Tropical Ecology. (4) Lecture, three hours; fieldwork, five hours. Requisites: course 100, Life Sciences 1, 3, 23L. Field research projects followed by two-week lecture course and offered only as part of Field Ecology Quarter. Introduction to biodiversity, community structure, and dynamics and ecosystem function in tropical forest habitat. Letter grading.

152. World Vegetation and Ecophysiology. (4) Lecture, three hours; discussion, one hour. Enforced requisite: Life Sciences 1. Diversity of physiological and ecological adaptations in plants of the world, explaining distribution and dynamics of world vegetation types. Focus on processes across scales from cells to ecosystems that determine function for environmental and ecophysiological measurements, and experiments used to make discoveries about plant adaptation. Letter grading.

153. Ecological Responses to Environmental Challenges. (4) Cr/No credit discussion, one hour. Requisites: Chemistry 14A, 14B, and 14BL or 20A, 20B, and 20L, Life Sciences 1. Recommended: Life Sciences 2, 3, 4, 23L. Physics 6A. Chemical and physical principles pertinent to understanding functional responses of organisms to environmental challenges, including those due to anthropogenic causes. Integrative focus providing comprehensive training in basic scientific and technical processes, organismal acclimation and adaption, and consequences of individual performance for populations and communities. Select applied topics include challenges associated with life in a changing climate, low oxygen availability and dead zones, and changes in mass transport due to unprecedented variation in air and water motions. P/NP or letter grading.

154. California Ecosystems. (5) Lecture, three hours; laboratory, three hours. Modern biological interpretation of communities and ecosystem processes. Emphasis on critical reading of primary literature. Recommended: course 100. Introduction to structure, biodiversity, and dynamics of California ecosystems, with focus on Southern California, and impact of human activities on these systems. P/NP or letter grading.

155. Community Ecology. (4) Lecture, three hours; discussion, one hour. Requisite: Life Sciences 1. Recommended: course 100 or 122. Community ecology is study of biodiversity in ecological context; structure and dynamics of natural species assemblies. Focus on both historical and current community evolutionary mechanisms that determine which species are present or absent from particular assemblages. Examination of existing theories of community evolution in the light of observational data and experimental, bearing on these theories. Consideration of diversity of animal communities—plant, animal, microbial, terrestrial, and marine— to give appreciation of extraordinary natural history and diversity of life on Earth as it exists in its living ecological context. Discussion of how ecological communities are responding now and will respond in future to anticipated global change, and conservation implications of these changes. Letter grading.

160. Introduction to Plant Biology. (4) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 162. Introduction to plant form and function, plant diversity, gene expression, and basic plant function. Letter grading.

161. Plant Ecology. (4) Lecture, two and one half hours; discussion, one hour. Requisite: Life Sciences 1 or 170. Introduction to interrelated plant communities covering individuals, populations, communities, and global processes. Topics include plant form and function, seed dormancy and population dynamics, life histories, disturbance and succession, community structure and dynamics, and global change. P/NP or letter grading.

162. Plant Physiology. (4) Lecture, three hours; discussion, one hour. Requisites: Life Sciences 1, 2, 3, 23L. Basic aspects of plant function, including biochemical, physiological aspects of photosynthesis. Carbon and nitrogen metabolism and its regulation; organellar interactions and compartmentation. Water relations, ion transport, flowering, hormone action, and plant responses to stress. Letter grading.

162L. Plant Physiology and Ecophysiology Laboratory (4) Lecture, two hours; laboratory, six hours. Requisites: Life Sciences 1, 2, 3, 23L. Corequisite or requisite: course 152 or 162. Focus on whole-plant physiology and ecophysiology from biochemical and molecular processes to acquisitions of field performance to gain understanding and appreciation of plant function, including dynamic processes of growth, development, and reproduction. Exercises provide training in approaches and the scientific literacy that students become scientists, applying physiological techniques to answer questions on plant function, including use of programs such as FunAnatomy (plant anatomy) and FastPlant (growing experiment). To apply this course to the Biology upper-division major laboratory requirement, the corresponding lecture course must be completed with a passing grade. Letter grading.

163. Biology of Marine Ecosystems. (4) Lecture, five hours; laboratory, three hours. Requisites: Chemistry 14A, 14B, and 14BL or 20A, 20B, 20L, and 30AL, Life Sciences 1, 3, 23L. Highly recommended: course 152 or five-week intensive course offered only as part of Marine Biology Quarter. Survey of higher vertebrates living in marine habitats, including estuarine amphibians, marine reptiles, seabirds, and marine mammals. Laboratory emphasizes observational and experimental approaches to study of morphology, systematics, ecology, and behavior of local marine birds and mammals. Given off campus at marine science center. Letter grading.


165. Ecological Physiology of Marine Vertebrates. (4) Lecture, five hours; laboratory, 15 hours. Requisites: Chemistry 14A and 14B, or 20A, 20B, 20L, Life Sciences 1, 3, 23L. Recommended: Life Sciences 30B or Mathematics 3C or 32A, and Physics 1C and 4BL, or 6C or 6CH. Five-week intensive course offers an extended part of Marine Biology Quarter. Special emphasis on physiological adaptation to physiological adaptations of marine vertebrates to major physicochemical variables in world oceans and to major marine habitats. Given off campus at marine science center. Letter grading.


170. Animal Environmental Physiology. (4) Lecture, three hours; laboratory, six hours. Requisites: Chemistry 14B and 14BL, or 20B and 30AL, Life Sciences 1, 2, 3, 4, 23L, Mathematics 3C or 32A, 109, 109L, Physics 1C and 4BL, or 6C or 6CH. Not open for credit to students with credit for Physiological Science 166. Designed for Ecology, Behavior, and Evolution majors. Introduction to physiological (function) of animal organs and organ systems, with emphasis on environmental interactions and ecological adaptations. Letter grading.

C172. Advanced Statistics in Ecology and Evolutionary Biology. (4) Lecture, two hours; laboratory, two hours. Overview of and application of advanced statistical methods that go beyond linear models and mean comparison, including bootstrapping, permutation, Bayesian statistics, model selection, and network analysis. At course end students should be able to explain which statistical approaches are appropriate for different types of research questions and critically evaluate their outputs. All statistical analysis conducted in R. Concurrently scheduled with course C202. P/NP or letter grading.

CM173. Earth Process and Evolutionary History. (4) Formerly numbered C173) (Same as Earth, Planetary, and Space Sciences CM173) Lecture, three hours; discussion, one hour; laboratory, two hours. Enforced requisites: Chemistry 14A, 14B (or 20A, 20B, 20L), Life Sciences 1, 3, 2, 4. Recommended: one course from Atmospheric and Oceanic Sciences M100, 101, 102, 103, M105, Ecology and Evolutionary Biology 109, 116, 120, 121, 122, M131, 135, 142, 152, 154, Geography 100, 101, or 103. Exploration of relationship between processes affecting surface of Earth, such as tectonics and climate, and biological evolution. Geologic history of Earth from its formation and history of scientific advances in understanding Earth's atmosphere/ocean system discussed in terms of their effects on biological process and biodiversity. Climate issues considered in this historical context of global processes. Modern anthropogenic climate change placed in context of geologic record of climate change. Concurrently scheduled with course CM228. P/NP or letter grading.

provides framework for studying broad questions in evolution—How do body shapes evolve? What are dynamics of evolutionary arms race? Why are there so many species in tropics? Why are there so many beetles and so few crocodiles? Did dinosaurs put brakes on diversification of mammals? Examination of why tree of life is essential to understanding patterns of biological diversity and how phylogenetic comparative methods are used to test macroevolutionary hypotheses. Concurrently scheduled with course C230. Letter grading.

175. Evolutionary Dynamics of Sex. (4) Lecture, three hours; discussion, one hour. Enforced requisite: Life Sciences 1. Focus on the dynamics of reproduction when females and males are in conflict over reproductive decisions, with focus on animals with human examples as appropriate. Emphasis on natural selection thinking, sexual selection, and costs of sexual conflict, including Fisherian sex allocation, evolution of manipulation through deceptive communication, and theory of Darwinian sexual conflict. Letter grading.

176. Ecological Ethics. (4) Seminar, four hours. Requisite: Life Sciences 1 or 7B. Debates and discussions on current ethical considerations relevant to fields of ecology, evolution, conservation, and behavior. Letter grading.

C177. Practical Computing for Evolutionary Biologists and Ecologists. (4) Lecture, three hours; laboratory, two hours. Enforced requisite: Life Sciences 1. Introduction to fundamental skills needed for manipulation and analysis of large data sets. Basic programming and scripting in Python as well as working in shell, regular expressions, and related topics. Concurrently scheduled with course C234. Letter grading.

M178. Computational Systems Biology: Modeling and Simulation of Biological Systems. (5) (Same as Bioengineering CM188, Computational and Systems Biology M186, and Computer Science CM186.) Lecture, three hours; laboratory, three hours; discussion, eight hours. Corequisite: Electrical Engineering 102. Dynamic biosystems modeling and computer simulation methods for studying biophysical/biomedical processes and systems at multiple levels of organization. Control system, multicellular, predator-prey, pharmacokinetic (PK), pharmacodynamic (PD), and other structural modeling methods applied to life sciences problems at molecular, cellular (biochemical pathways/networks), organ, and organismic levels. Both theory- and data-driven modeling, with focus on developing and testing models and their analysis. Emphasis on translational goals and data fitting to mathematical models and implementing them for simulation and analysis. Basics of numerical simulation algorithms, with modeling software exercises in class and for independent projects. Letter grading.

C179. Communicating Science to Informal Audiences. (5) Lecture, three hours; discussion, one hour; laboratory or fieldwork, two hours. Enforced requisite: one course from course 25, Atmospheric and Oceanic Sciences M10, Chemistry 2, 14A, 20B, Earth, Planetary, and Space Sciences 1, 15, Environment M10, or Life Sciences 1. Designed for juniors/seniors. Combined instruction in inquiry-based teaching methods and learning pedagogy, with six weeks of supervised teaching experience at Santa Monica Pier Aquarium. Students practice communicating scientific knowledge and receive mentoring on how to improve their skills to develop ocean science literacy at all levels and to encourage broad public understanding of science and environmental stewardship. Need for young scientists to learn how to communicate science effectively to audiences is especially critical when considering that Americans are expected to comprehend and respond to increasingly complex issues, such as global climate change, with limited understanding of how natural worlds work. Concurrently scheduled with course C237. Letter grading.

180A-180B. Seminars: Biology and Society. (2-4) Seminar, three hours (course 180A) and four hours (course 180B). Introductions and discussions of current socially important issues involving substantial biolog-ical considerations, either or both as background for policy and as consequences of policy. May be repeated once for credit with instructor change. Letter grading.


185. Evolutionary Medicine. (4) Lecture, two and one half hours; discussion, one hour. Enforced requisite: Life Sciences 1. Not open to credit for students with credit for course 120. Designed for department majors specializing in environmental and population biology and in medicine. Introduction to genetics and processes of evolution, with emphasis on natural selection, population genetics, speciation, evolution, and patterns of adaptation. Coverage of fundamental concepts focused on clinical cases. Letter grading.

186. Evolutionary Medicine: Clinical Perspective on Medical, Surgical, and Psychiatric Disorders. (4) Lecture, three hours; discussion, one hour. From breast cancer and heart failure to self-injury, obsessive-compulsive and eating disorders, all contemporary medical illnesses have evolutionary roots. Understanding of application of evolutionary thought to issues faced by physicians, veterinarians, psychologists, and other healthcare providers. Development of awareness and understanding of evolution and medicine. Program includes presentation to healthcare providers with expanded perspective that enhances their practice and benefits their patients in whatever field they enter. Letter grading.

187. Variable Topics in Ecology and Evolutionary Biology. (4) Lecture, three hours; discussion, one hour. Requisites: Life Sciences 1, 2, 3, 4, 23L. Investigation, discussion, and study of current important issues involving substantial biological considerations in ecology and evolutionary biology. Contact Undergraduate Advising Office for current topics. May be repeated for credit. P/NP or letter grading.

188. Special Courses in Ecology and Evolutionary Biology. (2) Seminar, two hours. Departmentally sponsored experimental or temporary courses, such as those taught by visiting faculty members. May be repeated for credit. P/NP or letter grading.

190. Research Colloquia in Ecology and Evolutionary Biology. (4) Seminar, one hour. Designed to bring together students undertaking supervised tutorial research in seminar setting with one or more faculty members to discuss their own work or related work in discipline. Led by one supervising faculty member. P/NP grading.

191. Variable Topics Research Seminars: Ecology and Evolutionary Biology. (4) Seminar, three hours. Enforced requisite: current course in research in ecology and evolutionary biology. Consult Schedule of Classes for topics and instructors. If content is approved in advance by Undergraduate Advising Office, undergraduate departmental majors may petition to use course to satisfy or partially satisfy elective requirement. May be repeated for credit with consent of instructor. P/NP or letter grading.

192A-192B. Undergraduate Assistant in Ecology and Evolutionary Biology. (12) Lecture (course 192A) and six hours (course 192B). Limited to juniors/seniors. Training and supervised practicum for upper-division students under guidance of faculty mentor. May be repeated for credit. Individual contract required. P/NP or letter grading.

193. Journal Club Seminars: Ecology and Evolutionary Biology. (1) Seminar, two hours. Enforced corequisite: one course from 188 through 196 or 198. Designed to encourage participation and stimulate progress in specific research areas for undergraduate students who are part of departmental research group or internship. Discussion of use of specific research methods or literature in field or of research of faculty members or students. May be repeated for credit. P/NP or letter grading.

194A. Research Group or Internship Seminars: Access to Research Careers. (2) Seminar, six hours. Designed for juniors/seniors in research traineeships or those who have strong commitment to pursue research for career. Emphasis on field, physiological, or biomedical fields. Weekly presentation and discussion of paper selected from current literature. No more than 4 units may be applied toward departmental majors. May be repeated for credit. Letter grading.

194B. Research Group or Internship Seminars: Ecology and Evolutionary Biology. (1) Seminar, two hours. Corequisite: one course from 188 through 196 or 198. Designed to encourage participation and stimulate progress in specific research areas for undergraduate students who are part of departmental research group or internship. Discussion of use of specific research methods or literature in field or of research of faculty members or students. May be repeated for credit. P/NP or letter grading.

195. Community or Corporate Internships in Ecology and Evolutionary Biology. (4) Tutorial, 12 hours. Internship course for juniors/seniors to be supervised by Center for Community Learning, fieldwork site, and faculty adviser. Consult Undergraduate Advising Office for more information. Students meet on regular basis with instructor and provide periodic reports of their experience. May not be applied toward requirements for departmental majors. May be repeated twice for credit. Individual contract with supervising faculty adviser required. Letter grading.

196. Research Apprenticeship in Ecology and Evolutionary Biology. (2 to 4) Tutorial, three hours per week per unit. Limited to juniors/seniors. Entry-level research apprenticeship for upper-division students under guidance of faculty mentor. May be repeated for credit. Individual contract required. P/NP or letter grading.

198A-198B. Honors Research in Ecology and Evolutionary Biology. (4 each) Tutorial, 12 hours. Limited to juniors/seniors. Supervised individual research designed to broaden and deepen students’ knowledge of some phase of biology. Must be taken with Ecology and Evolutionary Biology Department faculty for at least two terms and for total of at least 8 units. Eight units may be applied toward departmental majors. Individual contract required. In Progress (198A) and letter (198B) grading. Students may elect to enroll in additional research through courses 198C and 198D (letter grading). Report on progress must be presented to undergraduate advisor each term 198 course is taken.

199. Directed Research in Ecology and Evolutionary Biology. (2 to 4) Tutorial, six to 12 hours. Preparation: submission of written proposal outlining study objectives to be undertaken. May do labo-ratory or field-related research, not literature surveys or library research. Proposal to be developed in consultation with instructor and submitted for approval to undergraduate adviser; schedule of term begins in that term. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. At end of term culminating report describing progress of study by research and signed by student and undergraduate adviser before day instruction begins. May be repeated for credit. Individual contract required. Letter grading.

Graduate Courses

M200A. Evolutionary Biology. (4) (Same as Earth, Planetary, and Space Sciences M216.) Lecture, two hours; discussion, two hours. Current concepts and
topics in evolutionary biology, including microevolu-
tion, speciation and species concepts, analytical bio-
ography, adaptive radiation, mass extinction, com-
munity evolution, molecular evolution, and develop-
ment of evolutionary thought. S/U or letter grading.

200B. Ecological Genomics. (4) Lecture, two hours;
labatory, two hours. Principles and current topics in
evolutionary biology. S/U or letter grading.

200C. Advanced Animal Behavior. (4) Lecture, two
hours; discussion, two hours. Survey of major topics
in field of behavioral ecology. Topics include intro-
duction to variety of research pursuits in field and ques-
tions and paradigms of research. Given off campus at
marine science center. S/U or letter grading.

210. Introduction to R for Ecology and Evolution-
ary Biology. (1) Lecture, six hours; discussion, six
hours. Designed for departmental PhD students. Of-
fers an intensive two-day course at beginning of term.
Introduction to R language. Topics include working at
command line, writing scripts and functions, flow control,
graphics, and conducting basic simulations in discrete and
continuous time. S/U or letter grading.

211. Molecular Evolution. (4) Lecture, two hours;
discussion, one hour. Designed for graduate students.
Topics include origin of species; population genetics and
molecular evolution; and development of R and S as
software packages. Concurrently scheduled with
course C219A. S/U or letter grading.

212. Evolutionary Trends. (4) Lecture, two hours;
discussion, one hour. Designed for graduate students.
Advanced topics in Darwinian evolution—How many
species in tropics? Why are there so many species in
tropics? Why are there so many beetles and so few crocodylens? Did dinosaurs put
beaks on diversification of mammals? Examination of
why tree of life is essentially continuous. Studies of
patterns of biodiversity and how phylogenetic comparative methods are used to test macroevolu-
tional hypotheses. Concurrently scheduled with
course C174. S/U or letter grading.

213. Molecular Molecular Evolution. (4) (Formerly
data. S/U or letter grading.

214. Marine Ornithology. (4) Lecture, two hours;
discussion, one hour; field trip, three hours. Requisite:
course 122. Concepts and topics in ecology, evolution,
ecological and evolutionary processes. Concurrently
teaching and learning in marine biotechnology. Topics vary from year to year and may include island
biogeography, tropical biology, biodiversity, modeling
in ecology, habitat selection, community structure
and organization, and ecology and evolution of repro-
ductive rates. May be repeated for credit. S/U or letter grading.

215. UCLA/La Kretz Workshop in Conservation Gen-
omics. (2) Lecture, two hours; discussion, one
hour; laboratory, two hours. Five-day field experience
at La Kretz Center Field Station and Stunt Ranch in
Santa Monica Mountains. Conservation biology and
ecology have had long and intimate relationship and
constitute one key application of evolutionary analysis
to real-world biological problems. Impacts of popula-
tion genetics, phylogenetics, and phylogeography have
been particularly striking for conservation bi-
ology and have helped solve some of most pressing
problems in biological conservation. Annual work-
shop to provide training environment for small group of
graduate students. Focus on conservation problems can best be addressed with ge-
nome-level data. Hands-on experience on efficient
collection, troubleshooting, and analysis of large
data sets for conservation-relevant problems. Active
participation from members of several U.S. govern-
ment agencies at forefront of endangered species
protection and management, providing forum for ex-
ploring relevant aspects of conservation genomics to
managers. S/U grading.

216. Practical Computing for Evolutionary Biolo-
gists and Ecologists. (4) Lecture, three hours; labo-
atory, two hours. Enforced requisite: Life Sciences 1.
Introduction to fundamental skills needed for data
manipulation, analysis, and visualization of large data sets.
Basic programming and scripting in Python as well as
working in shell, regular expressions, and related topics.
Completely scheduled with course C177. Letter grading.

217. Population Genetics. (4) (Formerly numbered
235.) Lecture, three hours; discussion, one hour. Basic
principles of population genetics. Reproductive
isolation and speciation, linkage disequilibrium, and
population genetic theory. Application of neutral theory to conservation issues. Given
off campus at marine science center. S/U or letter grading.

218. Marine Ecology. (4) Lecture, four hours; discus-
sion, one hour. Designed for graduate students. Em-
phasis on both mechanistic and adaptive approaches
toward understanding behavior. Independent project
required. S/U or letter grading.

219. Advanced Ornithology. (4) Lecture, two hours;
laboratory, two hours; fieldwork, two hours. Requisite:
courses 111 or 112. S/U or letter grading.

220. Advanced Evolutionary Genetics. (4) Lecture,
two hours; discussion, two hours. Emphasis on both
mechanistic and adaptive approaches toward under-
standing behavior. Independent project required. S/U or letter grading.

221. Mathematical and Computational Model-
ing. (4) Lecture, three hours; discussion, one hour.
Enforced requisite: Life Sciences 30B or Mathematics 3 B or 31A. Recommended: courses
100, 122, Life Sciences 1, Mathematics 3C. Introduc-
tion to basic techniques of scientific programming,
including formulation and analysis of mathematical
models, basic techniques of scientific programming,
probability and stochastic modeling, and methods to
relate models to data. Examples from ecology, but
traditional statistics course. Modern comparative biology
and ecological and evolutionary processes. S/U or letter grading.

222. Earth Process and Evolutionary History. (4)
(Same as Earth, Planetary, and Space Sciences
236. Seminar: Marine Molecular Biology. (4) Sem-
inar. 10 hours. Requisite: course 224; Seminar on
current issues and work in marine molecular biology.
Given off campus at marine science center. S/U or letter grading.
250. Professional Skills for Biological Research. (2 to 3) Seminar, two hours. Preparation, writing, and submission of research proposals. Collection and maintenance of field and laboratory data, preparation of scientific presentations, review of literature, and publishing strategies. Optional field trip offered during some years for 1 extra unit. S/U or letter grading.

251. Seminar: Systematics. (2) Seminar, two to four hours. Current topics in systematic biology, including methods development and specific applications in study of phylogeny. Theme varies from year to year. May be repeated for credit. S/U or letter grading.


255. Seminar: Invertebrate Zoology. (2) Seminar, two hours. S/U or letter grading.

259. Seminar: Herpetology. (2) Seminar, three hours. Seminar on current approaches to herpetology. Main theme varies from year to year in areas such as biogeography, ecology, behavior, environmental physiology. S/U or letter grading.


263. Seminar: Population Genetics. (2 or 4) Seminar, three to six hours. Seminar on topics of current interest in population genetics, such as kin selection, sociobiology, cultural evolution, conservation genetics, etc. S/U or letter grading.

264. Seminar: Stomatal Function. (4) Seminar, two hours; discussion, two hours. Open to undergraduates with consent of instructor. Structure and function of guard cells, gas exchange, environmental and hormonal regulation of stomatal responses; stomatal transduction; stomatal adaptations. S/U or letter grading.


270. Seminar: Environmental Physiology. (2) Seminar, two hours. S/U grading.


273. Seminar: Entomology. (2) Seminar, two hours. Discussion of specific topics in entomology related to specialized fields. Main theme varies from year to year, but usually emphasizes areas such as behavior, ecology, and evolution. S/U grading.


279. Seminar: Evolutionary Biology. (2) Seminar, two hours. Requisite: course M231. Emphasis on particular issue in evolutionary biology, varying in topic whenever offered. Topics may include advances in phylogenetic methodology; relationship between development and evolution; biogeography, climate change, and faunal evolution; dispersal mechanisms and macroevolutionary patterns; adaptation and diversification; macroevolutionary patterns in fossil record. S/U or letter grading.

282. Seminar: Ichthyology. (2) Seminar, two hours. Requisite: course 111 or 112. Student presentations and discussion of specific topics in ichthyology. Theme varies from year to year. May be repeated for credit. S/U or letter grading.


291. Seminar: Physiology and Biochemistry of Arthropods. (2) Seminar, two hours. S/U or letter grading.

295. Seminar: Evolution and Speciation. (2) Seminar, one to ten hours. Discussion of current topics related to evolution and speciation. S/U or letter grading.

299. Seminar: Parasitology. (2) Seminar, two hours. S/U or letter grading.

301. Seminar: Advanced Topics in Evolutionary Biology. (1 to 4) Seminar, three hours. Requisite: course 111 or 112. Emphasis on particular issue in evolutionary biology, varying in topic whenever offered. Topics may include advances in phylogenetic methodology; relationship between development and evolution; biogeography, climate change, and faunal evolution; dispersal mechanisms and macroevolutionary patterns; adaptation and diversification; macroevolutionary patterns in fossil record. S/U or letter grading.

302. Seminar: Comparative Physiology. (2) Seminar, two hours. Discussion of current topics related to evolutionary biology. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Requisite: consent of instructor. Designed for graduate students. Tutoring or teaching experience in biology classes. May be repeated for credit. S/U grading.
ECONOMICS
College of Letters and Science
8283 Bunche Hall
Box 951477
Los Angeles, CA 90095-1477
310-825-1011
http://www.economics.ucla.edu

Kathleen M. McGarry, PhD, Chair
Rosa L. Matzkin, PhD, Vice Chair
Ichiro Obara, PhD, Undergraduate Vice Chair
Andrew G. Atkeson, PhD, Director of Business Economics

Professors
John W. Asker, PhD
Andrew G. Atkeson, PhD (Stanley M. Zimmerman Endowed Professor of Economics and Finance)
Moshe Buchinsky, PhD
Ariel T. Burstein, PhD
Dora L. Costa, PhD
Michael R. Darby, PhD (Warren C. Cordon Professor of Money and Financial Markets)
Sebastian Edwards, PhD (Henry Ford II Professor of International Management)
Roger E. Farmer, PhD
Jinyong Hahn, PhD
Gary D. Hansen, PhD
Hugo A. Hopenhayn, PhD
Matthew E. Kahn, PhD
Edward E. Leamer, PhD (Chauncey J. Medberry Professor of Management)
Adriana Lleras-Muney, PhD
Rosa L. Matzkin, PhD (Charles E. Davidson Endowed Professor of Economics)
Kathleen M. McGarry, PhD
Ichiro Obara, PhD
Lee E. Ohanian, PhD
John G. Riley, PhD
Peter E. Rossi, PhD (James A. Collins Professor of Management)
Andres Santos, PhD
Aaron Tomell, PhD
Pierre-Olivier Weil, PhD
William R. Zame, PhD

Professors Emeriti
William R. Allen, PhD
Massanaro Aoki, PhD
Costas Azaradiis, PhD
Harold Demsetz, PhD
Bryan C. Ellickson, PhD
Arnold C. Harberger, PhD
Benjamin Klein, PhD
Deepak K. Lal, DPhil (James S. Coleman Professor Emeritus of International Development Studies)
Naomi R. Lamoreaux, PhD
Axel S. Leijonhufvud, PhD
John J. McColl, PhD
Joseph M. Ostro, PhD
Finis R. Welch, PhD

Associate Professors
Simon A. Board, PhD
Maurizio Mazzocco, PhD
Moritz Meyer-ter-Vehn, PhD
Sule Ozte, PhD
Marek G. Pycia, PhD
Till M. von Wachter, PhD
Wesley E. Yin, PhD

Assistant Professors
Youssef C. Benzarti, PhD
Saki Bigio, PhD
Dennis N. Chetverikov, PhD
Pablo D. Fajgelbaum, PhD
François Geerolf, PhD
Michela Gioccelli, PhD
Martin B. Hackmann, PhD
W. Walker Hanlon, PhD
Edward C. Kung, PhD
Zhipeng Liao, PhD

Jay Y. Lu, PhD
Rodrigo R.A. Pinto, PhD
Tomasz M. Sadzik, PhD
Shuyang Sheng, PhD

Lecturer
Edward P. McDevitt, PhD

Adjunct Assistant Professors
Patrick D. Convery, MBA, PhD
Randall R. Rijoas, PhD
William E. Simon, JD, PhD

Scope and Objectives
The Department of Economics undergraduate program is designed for students who wish to gain a thorough understanding of both empirical and theoretical approaches to economics. Emphasis is on economic principles applied to resolving interpersonal conflicts of interest and coordinating productive activity in a world of scarce resources. Because students must gain a thorough theoretical and technical competence before extensive study of the applied specialties in the discipline, one the core of the major in Economics is closely structured. Some courses are appropriate for nonmajors, but the curriculum is most suitable for students who wish to make the study of economics the primary focus in their undergraduate education.

The undergraduate major provides students with analytical training in reference to socio-economic phenomena and provides an excellent theoretical background for those pursuing graduate education in economics, law, management, public administration, journalism, social welfare, architecture and urban planning, and education. The graduate program is designed primarily for students pursuing the PhD degree. The doctoral is awarded to those students who have achieved the level of study and training required for a professional economist. The degree recognizes students’ ability to make scholarly contributions in their fields of specialization and to undertake advanced research in those areas.

Undergraduate Study
Economics BA
Admission
Application for the Economics major should be filed at the undergraduate counselors office in 2263 Bunche Hall. To apply, students must have completed at least 72 quarter units (but no more than 137 quarter units) of college credit, including equivalent courses taken elsewhere, and must be taken for a letter grade. A 2.0 (C-) grade is required in each pre-major course. To enter the major, students must have a minimum 2.5 grade-point average in the economics and mathematics preparation courses and a GPA of at least 2.0 in any upper-division courses taken for the major before applying.

Repetition of more than one preparation course or of any preparation course more than once, including equivalent courses taken elsewhere, results in automatic denial of admission to the major.

Transfer Students
Transfer applicants to the Economics major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one microeconomics course, one macroeconomics course, two calculus courses from the mathematics/physical sciences sequence, and one English critical reading and writing course.

Transfer students are required to take Economics 41 at UCLA rather than prior to transfer. Transfer credit for any of the above is subject to department approval; consult with an undergraduate counselor before enrolling in any courses for the major.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major
Required: Ten upper-division economics courses as follows: Economics 101, 102, 103, 103L, and six Economics Department upper-division elective courses. No more than two of the elective courses may also be selected from Management 120A, 120B, 122, 127A, 130A, 130B, 180 (real estate finance only).

Each course must be taken for a letter grade. Former courses 100, 110, and 120 may not be included among the 10 upper-division courses. Transfer credit is subject to department approval; consult with an undergraduate counselor before enrolling in any courses for the major.

To graduate, students must have at least a 2.0 grade-point average in their upper-division major courses, with grades of C– or better in Economics 101, 102, 103, and 103L.

Economics BA/Applied Economics MS Dual Program
An intercampus dual degree program between UCLA and UC Santa Cruz allows students to obtain a BA in Economics from UCLA and an MS in Applied Economics from UC Santa Cruz in three years. Contact the economics undergraduate counselor for additional information.

Business Economics BA
The Business Economics BA program offers a major for students seeking a business orientation in their study of economics. It does not replicate the traditional undergraduate business school curriculum. Instead, it offers a more tightly focused curriculum that is guided by the rigorous logic and integrative perspec-
tive of economics. It is designed to prepare students for graduate education in business, economics, and law. The program requires stu-
dents to include specific courses offered by the department and the John E. Anderson Graduate School of Management (see The Major).

Admission
Enrollment in the program is limited. Applications for admission are handled exclusively by the Department of Economics. To apply, stu-
dents must have completed at least 72 quarter units (but no more than 137 quarter units), one
12-unit term in residence in regular session at UCLA, and all courses listed under Preparation for the Major. In addition, they must (1) be en-
rolled in UCLA regular session at the time of application, (2) have a 2.0 (C) minimum grade in each preparation course, (3) have a mini-
imum 3.0 (B) overall average in all preparation courses except the writing course, and (4) have a minimum 2.0 (C) grade-point average in their upper-division courses taken for the ma-
jor before applying (Economics 101 applies on the major preparation grade-point average).

The requisite grade-point averages plus com-
pletion of the preparation for the major courses do not guarantee admission to the program. Admission is on a competitive basis, using the above qualifications as minimum standards for consideration.

Business Economics Premajor
While students are completing the preparation courses for the major, they may be classified as Business Economics premajors. (Transfer students who wish to enter UCLA as Business Economics premajors must meet the admis-
sion screening requirements. For information, contact Undergraduate Admission.)

Preparation for the Major
Required: Economics 1, 2, 11, 41, 101; one
Writing II course; Management 1A, 1B; Math-
ematics 31A, and 31B or 31E. Each course must be taken for a letter grade.

Repetition of more than one preparation course or of any preparation course more than once, including equivalent courses taken else-
where, results in automatic denial of admission to the major.

Transfer Students
Transfer applicants to the Business Economics major with 90 or more units must complete the following introductory courses prior to admis-
sion to UCLA: one microeconomics course, one macroeconomics course, two calculus courses from the mathematics/physical sci-
ences sequence, one English critical reading and writing course.

Transfer students are required to take Econom-
ics 41 at UCLA rather than prior to transfer. Transfer credit for any of the above is subject to department approval; consult with an under-
graduate counselor before enrolling in any courses for the major.

Refer to the UCLA Transfer Admission Guide
for up-to-date information regarding transfer selection for admission.

The Major
Required: Economics 102, 103, 103L, and at least two courses from the 106 series; English Composition 131B; five upper-division elective courses in economics and management (no
more than three management courses from
Management 108, 120A, 120B, 122, 123, 124, 126, 127A, 127B, 130A, 130B, 140 may be ap-
plied toward the elective requirement). In addi-
tion to Economics 103 and 103L, at least two economics courses with laboratories must be completed and may be selected from either the Economics 106 series or an economics
elective.

Each upper-division major course must be
taken for a letter grade. Transfer credit for any
of the major courses is subject to department
approval; consult with an undergraduate coun-
selor before enrolling in any courses for the major.

To graduate, students must have a minimum
2.0 grade-point average in their upper-division
courses, with at least a C– in each
course. (Economics 101 applies on the prepa-
rating for the major, therefore requiring a mini-
imum grade of C.)

Mathematics/Economics BS
See the Mathematics/Economics listing for a
description of the major.

Honors Program
The departmental honors program is open to
majors in Economics and Business Economics
who have a cumulative grade-point average of
at least 3.5 in the major and in all courses taken
at UCLA prior to application.

To qualify for departmental honors at gradu-
ation, students must (1) select at least seven of the required upper-division courses from the approved list designated for depart-
mental honors, (2) complete a two-semester thesis acceptable to the departmental honors committee in Economics 198A and 198B, and
(3) complete the major requirements with at
least a 3.5 grade-point average in the econom-
ics courses. Highest honors are awarded at the
discretion of the departmental honors commit-
tee based on grade-point average and quality
of the senior thesis.

Economics 198A and 198B, the courses re-
quired for thesis preparation, may be counted
as upper-division courses toward the field in
which the thesis is written (for purposes of sat-
fying the requirements for the major). Further
information and application forms are available
from an undergraduate counselor in 2263 Bunche Hall.

Graduate Study
Official, specific degree requirements are de-
tailed in Program Requirements for UCLA
Graduate Degrees, available at the Gradu-
ate Division website. In many cases, more detailed
guidelines may be outlined in announcements,
other publications, and websites of the schools,
departments, and programs.

Graduate Degrees
The Department of Economics offers Master
of Arts (MA), Candidate in Philosophy (CPHil),
and Doctor of Philosophy (PhD) degrees in Eco-
nomics and a self-supporting Major of Ap-
plicated Economics (MAE) degree.

Economics
Lower-Division Courses
1. Principles of Economics. (4) Lecture, three hours;
discussion, one hour. Not open to students with credit
for former course 100. Introduction to principles of
economic analysis, economic institutions, and issues
of economic policy. Emphasis on allocation of re-
sources and distribution of income through price
system. P/NP or letter grading.

2. Principles of Economics. (4) Lecture, three hours;
discussion, one hour. Enforced requisite: course 1.
Not open to students with credit for former course
100. Introduction to principles of economic analysis,
economic institutions, and issues of economic policy.
Emphasis on aggregate economics, including na-
tional income, monetary and fiscal policy, and inter-
ternational trade. P/NP or letter grading.

5. Introductory Economics. (4) Lecture, three hours.
Not open to students with credit for course 1, 2, or
former course 100. Principles of economics as tools
of analysis. Presentation of set of concepts with
which to analyze wide range of social problems

that economic theory illuminates. May not be used to
fulfill entrance requirements for any Economics Depart-
ment major. P/NP or letter grading.

11. Microeconomic Theory. (4) Lecture, three hours;
discussion, one hour. Enforced requisites: courses 1,
2, Mathematics 31A, 31B. Laws of demand, supply,
returns, and costs; price and output determination in
different market situations. P/NP or letter grading.

41. Statistics for Economists. (4) Lecture, three hours;
discussion, one hour. Enforced requisites: Mathematics 31A, 31B. Not open to students with
credit for former Statistics 11. Introduction to proba-
bility and statistics for economists, with emphasis
on rigorous arguments. Letter grading.

97. Economic Toolkit. (4) Lecture, three hours.
Coverage of essential mathematical and program-
mming skills needed for study of Economics. Review of
calculus (first derivatives, partial derivatives, elemen-
tary integral calculus), Excel (handling data, using
simple arithmetic, mathematical, and financial func-
tions, use of Solver), and extended introduction to
statistical language R and/or Stata. Consult instructor
for specific software. Offered in summer only. P/NP
grading.

Upper-Division Courses
101. Microeconomic Theory. (4) Lecture, three hours;
discussion, one hour. Requisite: course 11. Theory of
factor pricing and income distribution, general equi-
librium, implications of pricing process for optimum
allocation of resources, game theory, and interest and
capital. P/NP or letter grading.

102. Macroeconomic Theory. (4) Lecture, three hours;
discussion, one hour. Requisite: course 101. Theory
of income, employment, and price level. Analysis of
total growth and business fluctuations; introduc-
tion to monetary and fiscal policy. P/NP or letter
grading.

103. Introduction to Econometrics. (4) Lecture, three
hours; discussion, one hour. Enforced requi-
sites: courses 11, and 41 or Mathematics 170A or
Statistics 100A. Enforced corequisite: course 103L.
Introduction to theory and practice of econometrics,
with goal to make students effective consumers and
producers of empirical research in economics. Em-
phasis on intuitive understanding rather than on rig-
orous arguments; concepts illustrated with applica-
tions in economics. P/NP or letter grading.
300 / Economics

103L. Econometrics Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisites: courses 11, and 41 or Mathematics 170A or Statistics 100A. Enforced corequisite: course 103. Econometric analysis of case-based studies. Hands-on data collection and problem solving. Use of econometric software. P/NP or letter grading.

106A. Economics in Practice. (4) Seminar, three hours. Enforced requisites: courses 11, 101, 102. Enforced corequisite: course 106A. Case-based analysis requiring students to apply material from course 106D to real-world problems regarding issues such as economic theory and empirical methods. Hands-on data collection and problem solving and presentation of student analyses both orally and in writing. P/NP or letter grading.

106AL. Economics in Practice Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisites: courses 11, 101, 102. Enforced corequisite: course 106A. Case-based analysis requiring students to apply material to case-based studies. Hands-on data collection and problem solving and presentation of student analyses both orally and in writing. P/NP or letter grading.

106B. Finance Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisite: course 102. Enforced corequisite: course 106B. Case-based analysis requiring students to apply theory from course 106B to real-world problems regarding topics such as diversified cash flow analysis, CAPM model, and applications to public policy. Letter grading.

106F. Finance Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisite: course 102. Enforced corequisite: course 106F. Case-based analysis requiring students to apply theory from course 106F to real-world problems regarding issues such as discounted cash flow analysis, Capital asset pricing model, and applications to public policy. Letter grading.

106G. Introduction to Game Theory. (4) Lecture, three hours; discussion, one hour (when scheduled). Requisite: course 101. Enforced corequisite: course 106G. Introduction to basic ideas of game theory and strategic thinking. Discussion of ideas such as dominance, backward induction, Nash equilibrium, commitment, credibility, asymmetric information, and signaling, with application to examples from economics, politics, business, and other real-life situations. Letter grading.

106GL. Introduction to Game Theory Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisite: course 101. Enforced corequisite: course 106G. Case-based analysis requiring students to apply material from course 106G to real-world problems involving game theory and strategic thinking in economics, politics, business, and other real-life situations. Hands-on data collection and problem solving and presentation of student analyses both orally and in writing. P/NP or letter grading.


106IL. Organization of Firms Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisite: courses 11, 101, 102. Enforced corequisite: course 106IL. Application of analytical tools of economics and finance to real-world problems in financial markets to link models students have learned in prior courses to patterns observed in financial markets and to understand when it is that further theoretical refinements are required to better account for certain observed patterns. Development of understanding of potential effects of market microstructure and market mechanisms on financial markets. Topics include bond market, stock market, foreign exchange market, financial crisis and financial system, and discussion of lessons of subprime crisis and European sovereign debt crisis. P/NP or letter grading.

106M. Financial Markets and Financial Institutions. (4) Lecture, three hours; discussion, one hour. Requisites: courses 11, 101, 102. Enforced corequisite: course 106M. Application of analytical tools of economics and finance to real-world problems in financial markets to link models students have learned in prior courses to patterns observed in financial markets and to understand when it is that further theoretical refinements are required to better account for certain observed patterns. Development of understanding of potential effects of market microstructure and market mechanisms on financial markets. Topics include bond market, stock market, foreign exchange market, financial crisis and financial system, and discussion of lessons of subprime crisis and European sovereign debt crisis. P/NP or letter grading.

106ML. Financial Markets and Financial Institutions Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisite: course 102. Enforced corequisite: course 106ML. Application of analytical tools of economics and finance to real-world problems in financial markets to link models students have learned in prior courses to patterns observed in financial markets and to understand when it is that further theoretical refinements are required to better account for certain observed patterns. Development of understanding of potential effects of market microstructure and market mechanisms on financial markets. Topics include bond market, stock market, foreign exchange market, financial crisis and financial system, and discussion of lessons of subprime crisis and European sovereign debt crisis. P/NP or letter grading.


106PL. Pricing and Strategy Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisite: course 101. Enforced corequisite: course 106PL. Case-based analysis requiring students to apply material from course 106P to real-world problems involving linear programming and shadow pricing, peak load pricing, two-part pricing, strategic pricing, and auctions and bidding. Hands-on data collection and problem solving and presentation of student analyses in writing. P/NP or letter grading.

106T. Economics of Technology and E-Commerce. (4) Lecture, three hours. Requisites: courses 11, 101, 102. Enforced corequisite: course 106T. Use of rigorous economic tools to analyze world of technology and e-commerce. Examination of economic theory, empirical analysis, and case studies to study variety of new markets. Topics include bidding in online auctions, two-sided markets, matching markets, and reputation mechanisms. Written case on one particular firm and presentation required. P/NP or letter grading.

106TL. Economics of Technology and E-Commerce Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisites: courses 11, 101, 102. Enforced corequisite: course 106TL. Case-based analysis requiring students to apply material to case-based studies. Hands-on data collection and problem solving and presentation of student analyses both orally and in writing. P/NP or letter grading.


110. Theories of Economic Growth and Development. (4) Lecture, three hours. Requisites: courses 11, 101, 103. Application of theoretical and empirical tools from microeconomics to provide insights into problems confronting low-income countries today and to evaluate policies that are likely to be effective in improving well-being of poorest on globe. P/NP or letter grading.


121. International Trade Theory. (4) Lecture, three hours; discussion, one hour. Requisite: course 101. Open to students with credit for former course 120. Theory of international trade: bases, direction, terms, volume, and gains of trade. Effects of tariffs,
quantitative restrictions, and international integration. Effects of free and regulated trade on economic welfare and political stability. P/NP or letter grading.

122. International Finance. (4) Lecture, three hours; discussion, one hour. Requisite: course 102. Enforced corequisite: course 122. Not open to students who have credit for course 120. Emphasis on interpretation of balance of payments and adjustment to national and international equilibrium through changes in price levels, exchange rates, and national income. Other topics include international capital flows, determination of exchange rates under various monetary standards, capital movements, exchange controls, and international monetary organization. P/NP or letter grading.

122L. International Finance Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisite: course 102. Enforced corequisite: course 122. Case-based analysis requiring students to apply material from course 122 to real-world problems involving international finance. Topics and analysis include balance of payments, exchange rates under various monetary arrangements, capital flows, exchange controls, and international monetary organization. Hands-on data collection and problem solving and presentation of student analyses in writing, P/NP or letter grading.

M123. Foreign Exchange Market and Exchange Rate Determination. (4) Lecture, two hours; laboratory, one hour. (Same as Honors Collegium M109.) Seminar, four hours. Introduction to forecasting of exchange rates. Theory linked with real-world data through use of powerful computer software. Concepts of foreign exchange market analyzed in computer laboratory. Analysis of how foreign exchange markets work, what financial instruments are used in this market, and what main theoretical determinants of exchange rates are. Generating expectations of exchange rate forecasts by combing theoretical concepts with real-world data using concepts and techniques from computer science, linguistics, and statistics. Students are required to code their own exchange rate forecasts and to evaluate accuracy of student forecasts. P/NP or letter grading.

C126A-C126B-C126C. Seminars: International Economics. (4-4-4) Seminar, three hours. Requisites: courses 111, 101, 102. Limited to seniors. Overview of most current developments in international economics for advanced undergraduate and graduate students. Introduction to graduate-level research in this field. Different topics each week, with presentation and discussion of new papers. Research in progress presented, discussed, and criticized by visiting experts, UCLA faculty members, and advanced graduate students. Concurrently scheduled with courses C285A-C285B-C285C. P/NP or letter grading.


130L. Public Economics Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisite: courses 111, 101, 103. Corequisite: course 130. Case-based analysis requiring students to apply theory from course 130 to real-world problems regarding government spending programs, taxation, deficit financing, and federal credit programs. Hands-on data collection and problem solving and presentation of student analyses both orally and in writing. P/NP or letter grading.


131L. Economics of Health and Healthcare Laboratory. (1) Lecture, one hour; laboratory, one hour. Enforced requisite: courses 111, 101, 103. Enforced corequisite: course 131. Case-based analysis requiring students to apply theory from course 131 to real-world problems regarding economics of health and healthcare. Hands-on data collection and problem solving and presentation of student analyses both orally and in writing. P/NP or letter grading.

132. Topics in Taxation and Social Insurance. (4) Lecture, two hours; laboratory, two hours; discussion, one hour. Requisite: course 111. In-depth examination of selected topics related to current policy debates. Topics vary to survey major issues in taxation, including tax policy or social insurance. Topics may include optimal taxation, tax inefficiencies and their implications for labor supply, savings, and investment; income redistribution and personal income tax; corporate taxation; and implications for firms’ investment and financing decisions; Social Security and SSI reform; and welfare programs. P/NP or letter grading.

M134. Environmental Economics. (4) (Same as Environmental M134.) Lecture, three hours. Requisites: course 41 or Statistics 12 or 13, and course 101 may be waived with consent of instructor). Introduction to major ideas in natural resources and environmental economics, with an emphasis on sustainable incentives to protect environment. Highlights important role of using empirical data to test hypotheses about pollution’s causes and consequences. P/NP or letter grading.

M135. Economic Models of Public Choice. (4) (Same as Political Science M135.) Lecture, three hours; discussion, one hour (when scheduled). Preparation: any lower-division political science course. Enforced corequisite: course 111. Designed for juniors/seniors. Analysis of methods and consequences of arriving at collective decisions through political mechanisms. Topics include free-rider problems, legislative process, decision-making under constraint, and bargaining. P/NP or letter grading.

137. Introduction to Urban and Regional Economics. (4) Lecture, four hours. Requisite: course 11. Survey of broad range of policy and theoretical issues that are raised when economic analysis is applied in urban setting. Topics include urbanization and urban growth, housing markets, location decisions of households and firms, transportation, urban labor markets, and local public sector. P/NP or letter grading.

140. Inequality: Mathematical and Econometric Approach. (4) Lecture, three hours. Requisites: courses 101, 103, 104, 131, or 115A. In past decade economists have learned remarkable amount about how society works. Increased understanding through application of sophisticated economic methods and research—explicitly on mathematical models and eclectric statistical techniques—to topics like healthcare, crime, education, and immigration, leading to increased understanding of inequality, how to measure it, how inequality has increased in U.S., how America differs from other rich countries, and what causes inequality. Study of this work, with focus on two important influences on inequality—education and health. Lec, disc.

141. Topics in Microeconomics: Mathematical Finance. (5) Lecture, three hours; computer laboratory, one hour. Requisites: course 111, Mathematics 32A, either Statistics 100A or Mathematics 170A. Economics of financial markets, competitive equilibrium with time and uncertainty, one period security market model, market completeness. P/NP or letter grading.

142. Topics in Microeconomics: Probabilistic Microeconomics. (4) Lecture, three hours. Requisite: course 101. Combination of basic probability introduced in Statistics 11 with microeconomic models presented in courses 11 and 101 in order to explain phenomena such as search, exploration, and stock market behavior. Optimal production and consump- tion under uncertainty. Review of probability and in- troduction to alternative measures of risk and risk aversion. P/NP or letter grading.

143. Advanced Econometrics. (4) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisite: course 103. Not open for credit to students with credit for former course 147A or 147B. Heteroskedasticity, limited dependent variable, panel data, time-series. P/NP or letter grading.

144. Economic Forecasting. (4) Lecture, three hours. Preparation: familiarity with data analysis software (e.g., R, Excel, MATLAB, Stata) and/or programming experience. Enforced requisite: courses 101, 103/11, 130. Theory of time-series methods to forecasting in economics, business, and government. Topics include modeling and forecasting techniques, including of stochastic trends, volatility measure, and evaluation of forecasting techniques. Hands-on approach to real-world data analysis methods widely used by econo- mists. P/NP or letter grading.

145. Topics in Microeconomics: Mathematical Economics. (4) Lecture, three hours. Requisite: course 101. Possible topics include game theory; competitive equilibrium analysis; examination of market failure and role for market intervention. P/NP or letter grading.

C146A-C146B-C146C. Seminars: Asset Pricing, (4-4-4) Seminar, three hours. Requisites: courses 111, 101, 102. Limited to seniors. Overview of most current developments in asset pricing theory for advanced undergraduate and graduate students. Introduction to graduate-level research in this field. Different topic each week, with presentation and discussion of new papers. Research in progress presented, discussed, and criticized by visiting experts, UCLA faculty members, and advanced graduate students. Concurrently scheduled with courses C296A-C296B-C296C. P/NP or letter grading.

148. Behavioral Economics. (4) Lecture, three hours. Enforced requisite: course 101. Behavioral economics is emerging subfield of economics that incorporates insights from psychology and other social sciences into economic models by incorporating realistic features such as aversion to losses, problems with self control, or concerns for others and thereby improve economic analyses. Review of some standard assumptions made in economics and examination of evidence on how human behavior systematically depart from these assumptions. Investigation of attempts to exp- lore alternative models of human decision making and assessment to what extent these alternative models help improve economic analyses. P/NP or letter grading.


151. Topics in Labor Economics. (4) Lecture, three hours. Requisites: course 110, 101, 103. Enforced corequisite: course 150. Case-based analysis requiring students to apply theoretical tools from course 150 to real-world problems in- volving labor economics. Topics include labor supply determination, household life-cycle aspects of labor supply, short-run and long-run labor demand, monopsony in labor market, quasi-fixed labor costs and labor demand, human capital, and other extended topics. Hands-on data collection and problem solving and presentation of student analyses both orally and in writing. P/NP or letter grading.


C156A-C156B-C156C. Seminars: Labor Economics, (4-4-4) Seminar, three hours. Requisites: courses 111, 101, 102. Limited to seniors. Overview of most current developments in labor economics for advanced graduate and graduate students. Introduction to graduate-level research in this field. Different topic each week, with presentation and discussion of new papers. Research in progress presented, discussed, and criticized by visiting experts, UCLA faculty members, and advanced graduate students. Concurrently scheduled with courses C296A-C296B-C296C. P/NP or letter grading.

Economics / 301
170L. Industrial Organization: Theory and Tactics Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisite: course 101. Enforced corequisite: course 170L. Case-based analysis requiring students to apply material from course 170L to real-world problems such as mergers, inter-firm behavior, pricing practices, antitrust and other topics. Hands-on data collection and problem solving and presentation of student analyses both orally and in writing. P/NP or letter grading.

173A-173B. Introduction to Social Entrepreneurship. (4-4) Lecture, one hour; research group meeting, two hours. Course 173A is requisite to 173B. Full-scaale immersion in entrepreneurship. Introduction to basics of business planning for social enterprises. Students are assigned in teams to work with participating social enterprises in Los Angeles area to implement new revenue-generating business plan for social enterprises to which they are assigned. Teams receive support from MBA student volunteers as advisers on how to work effectively together and how to resolve issues that arise with staff of assigned social enterprise. Courses 173A and 173B must be taken in consecutive terms. In Progress (173A) and P/NP or letter (173B) grading.

174. Economics of Sports. (4) Lecture, three hours. Enforced corequisite: course 101. Most current developments in economics of sport and leisure. Requisites: courses 101, 102, 103. How do sports and leisure industries shape our society, what is the economics of sports, how do they fit in with the larger picture of how the economy works, how do we apply material from course 165 to real-world problems such as mergers, inter-firm behavior, pricing practices, antitrust and other topics. Hands-on data collection and problem solving and presentation of student analyses in writing. P/NP or letter grading.

175. History of Capitalism in American Economy. (4) Lecture, three hours. Enforced corequisite: course 101. Enforced corequisite: course 165L. How did we get here? How does capitalism work? What are the features of capitalism? What role did government play in the development of capitalism? The growth of capitalism—what economists call market economy with well-defined and protected civil rights and property rights—has contributed to America’s economic growth. Quantitative course, with analysis of how different features of capitalist economies impact economic growth, investment, consumption, and technical change, using computer simulations based on prominent historical examples. P/NP or letter grading.

165L. History of Capitalism in American Economy Laboratory. (1) Lecture, one hour; laboratory, one hour. Enforced corequisite: course 101. Enforced corequisite: course 165L. How did we get here? How does capitalism work? What are the features of capitalism? What role did government play in the development of capitalism? The growth of capitalism—what economists call market economy with well-defined and protected civil rights and property rights—has contributed to America’s economic growth. Quantitative course, with analysis of how different features of capitalist economies impact economic growth, investment, consumption, and technical change, using computer simulations based on prominent historical examples. P/NP or letter grading.


192. Undergraduate Practicum in Economics. (3) Seminar, two hours. Limited to juniors/seniors. Training and supervised practicum for advanced undergraduate students. Students assist in preparation of course materials and development of innovative programs with guidance of faculty members. P/NP or letter grading.

195A-195B. Community or Corporate Internships in Economics I, II. (2-4) Tutorial, to be arranged. Enforced corequisite: courses 101, 102, 103. Research seminars on selected topics in economics, Business Economics, Business Economics/International Area Studies, and Mathematics/Economics majors. Internship to be supervised by Economics Department. Further supervision to be provided by business or entity for which student is doing internship. Students meet on regular basis with instructor and provide periodic reports of their experience. May not be applied toward major requirements. Only 8 units may be counted toward undergraduate degree. Individual contract with supervising faculty member required. P/NP grading.

195C. Community and Corporate Internships in Economics. (4) Tutorial, to be arranged; fieldwork, eight to 12 hours. Enforced corequisite: courses 11, 101, 102, 103. Enforced corequisite: courses 11, 101, 102, 103. Community and Corporate Internships in Economics. Business Economics, Economics/International Area Studies, and Mathematics/Economics majors. Internship to be supervised by Economics Department. Further supervision to be provided by business or entity for which student is doing internship. Students meet on regular basis with instructor and provide periodic reports of their experience. May not be applied toward major requirements. Only 8 units may be counted toward undergraduate degree. Individual contract with supervising faculty member required. P/NP grading.
for credit with consent of department. Individual contract with supervising faculty member required. P/N or letter grading.

198A. Honors Research in Economics I. (4) Tutorial, three hours. Requisites: courses 111, 101, 102. Limited to seniors/juniors program students. First term of two-term sequence in which students develop honors thesis or comprehensive research project under direct supervision of faculty member. Individual contract required. In Progress grading. Credit to be given only on completion of course 198B.

198B. Honors Research in Economics II. (4) Tutorial, three hours. Requisite: course 198A. Limited to senior departmental honors program students. Second term of two-term sequence in which students complete honors thesis or comprehensive research project under direct supervision of faculty member. Individual contract required. Letter grading.

199A. Directed Research in Economics. (4) Tutorial, three hours. Requisites: courses 111, 101, 102. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated twice but may be applied only toward major requirements. Individual contract required. P/N or letter grading.


Graduate Courses

Foundations of Economics

200. Mathematical Methods in Economics. (4) Lecture, three hours. Should be taken prior to enrollment in course 201A. Examination of mathematical methods used in graduate-level courses in microeconomics, macroeconomics, and quantitative methods. Topics include real analysis, linear algebra and matrices, calculus of many variables, static optimization, and dynamics and dynamic optimization. S/U grading.

200B. Mathematical Methods in Economics II. (4) Lecture, three hours; laboratory, two hours. Should be taken prior to or concurrent with course 201B. Linear algebra and analysis. Topics will vary from linear difference equations. Basic real analysis, normed vector space/ Banach space, Hahn-Banach theorem, Schauder fixed point theorem, and theory of correspondence. S/U grading.

201A-201B-201C. Microeconomics. (4-4-4) Lecture, three hours. S/U or letter grading:


201C. Game Theory with Asymmetric Information and Applications. (4) Lecture, three hours. Perfect Bayesian equilibrium and refinements, mechanism design. Applied topics e.g. as adverse selection, signaling, moral hazard, bidding, price discrimination, and public good provision. S/U or letter grading.

202A-202B-202C. Macroeconomics. (4-4-4) Lecture, three hours. S/U or letter grading:


203B. Introduction to Econometrics II. (4) Lecture, three hours; discussion, one hour. Estimation and testing. Basic linear regression model, tests of hypotheses, generalized least squares, heteroskedasticity, multicollinearity, error-in-variables, and qualitatively dependent variables. S/U or letter grading.

203C. Introduction to Econometrics III. (4) Lecture, three hours; discussion, one hour. Econometric methods for time-series econometrics, including theory and applications. Requisites: course 203B. Time-series techniques, unit root theory, cointegrated system approaches, autocorrelation robust inference, Wold and Beveridge and Nelson (BN) decompositions, model selection, nonlinear nonstationary models, spatial density asymptotics and semi-nonparametric time-series models. S/U or letter grading.

204A-204Z. Applications of Economic Theory. (4 each) Lecture, three hours. S/U or letter grading:

204A-204B-204C. California Population Research Topics. (4) Same as Health Policy M201A, M252A) Seminar, three hours. Examination of issues such as demography, health, aging, labor, and broad array of topics concerned with effects of economic, social, and policy on human behavior both in U.S. and abroad. Each course may be taken independently for credit. S/U grading.

204M-204M-204N. Seminars: Pharmaceutical Economics and Policy. (1-1-2) (Same as Health Policy M204M-204M-204N) Seminar, three hours every other week. Requisite: Health Policy M236. Limited to graduate public health and economics students. Various topics in economics of pharmaceutical industry, including rates of innovation, drug regulation, and economic impact of pharmaceuticals. In Progress (204M, 204M4) and letter (204M4) grading.

204R. (4) Lecture, three hours. Preparation: completion of first two courses and graduate econometrics courses. In past decades economists have learned remarkable amount about how society works. Increased understanding has come about due to analysis of wide variety of applications from industrial organization, corporate finance, public economics, S/U or letter grading.

211B. Economics of Uncertainty, Information, and Games. (4) Lecture, three hours. Preparation: introductory probability. Enforced requisite: course 201C. Theory of decision making under uncertainty, applied to topics such as asset pricing models, adverse selection, moral hazard, bargaining, signaling, auctions, and search. S/U or letter grading.


Economic Theory

211A. Contract Theory. (4) Lecture, three hours. Preparation: introductory probability. Enforced requisite: course 201C. Theory of individual decision making under uncertainty, applied to topics such as asset pricing models, adverse selection, moral hazard, bargaining, signaling, auctions, and search. S/U or letter grading.

212A. Behavioral Economics I. (4) Lecture, three hours. Preparation: introductory probability. Enforced requisite: course 201C. Application of behavioral theories to microeconomic theory and for students who want to acquire good theory background to do applied work. Consideration of counterintuitive results in field and topics of current research, including notions of equilibrium in static and dynamic games, reasoning in games, repeated games, games of incomplete information, and experimental economics.

212B. Applied Game Theory. (4) Lecture, three hours. Preparation: calculus, introductory probability. Use of theory of Bayesian games to study bargaining, mone-
one theoretical restriction on data. Subgroups of students report back to class using technique on their selected data set. S/U or letter grading.

222B-2222. Topics in Monetary Economics. (4 each) Lecture, three hours. Current research in monetary economics. Content varies. May be repeated for credit. S/U or letter grading.

C226A-C226B-C226C. Seminars: Monetary Economics/Macroeconomics. (4-4-4) Seminar, three hours. Designed for predissertation and dissertation writers. Overview of most current developments in monetary economics and macroeconomics for advanced undergraduate and graduate students. Introduction to graduate-level research in this field. Different topics each week, with presentation and discussion of new papers. Research in progress presented, discussed, and criticized by visiting experts, UCLA faculty members, and advanced graduate students. Concurrently scheduled with courses C165A-C165B-C166C. S/U (C226B) and S/U or letter (C226A, C226C) grading.

228A-228B-228C. Proseminars: Monetary Economics. (4-4-4) Seminar, three hours. Workshops for predissertation and dissertation writers. Literature surveys or research in progress presented, discussed, and criticized by visiting experts, UCLA faculty members, advanced graduate students. Research paper required. S/U grading. Also see Management 239A. 239B, 239C (PhD sequence in finance). 239D (advanced topics in finance). 239X, 239Y, 239Z (finance workshops)

Econometrics

21A. Advanced Econometrics I. (4) Lecture, three hours. Econometric methods for microeconometric models. Topics include identification, nonparametric estimation, limited dependent variable models, duration, panel data, tests of hypotheses. S/U or letter grading.

21B. Advanced Econometrics II. (4) Lecture, three hours. Econometric methods for empirical research in economics. Topics include simultaneous equations, instrumental variables, panel data, treatment effects, and point and partial identification, with applications in static and dynamic models, interactions, matching, and network formation. S/U or letter grading.

21C. Advanced Econometrics III. (4) Formerly numbered 222C. Lecture, three hours. Advanced topics in econometrics that may vary year to year. Current topics include empirical process methods with applications to quantile regression and general M-estimation, estimation and inference methods in high-dimensional models, including LASSO and Donoho/Selectron techniques, and bootstrap. May be repeated for credit. S/U or letter grading.


M232A-M232B. Bayesian Econometrics. (4) Same as Political Science M232B. Lecture, three hours. Requisites: courses 231A, 231B. Subjective probability, introduction to decision theory, Bayesian analysis of regression, sensitivity analysis, simplification of models, criticism. May be repeated for credit. S/U or letter grading.

238A-238B-238C. Proseminars: Econometrics. (4-4-4) Seminar, three hours. Quarterly seminars for predissertation and dissertation writers. Research in progress presented, discussed, and criticized by visiting experts, UCLA faculty members, and advanced graduate students. Research paper or presentation required. S/U grading.

Economic History

21A. Economic History of Western Europe. (4) Lecture, three hours. Selected topics in economic history with emphasis on evolution of institutions and growth. Serfdom, medieval agriculture and agricultural revolution, demographics, industrial revolution, imperial expansion, and decline of Britain. S/U or letter grading.


246A-246B-246C. Seminars: Economic History. (4-4-4) Seminar, three hours. Designed for predissertation and dissertation writers. Overview of most current developments in economic history for advanced undergraduate and graduate students. Introduction to graduate-level research in this field. Different topic each week, with presentation and discussion of new papers. Research in progress presented, discussed, and criticized by visiting experts, UCLA faculty members, and advanced graduate students. Concurrently scheduled with courses C186A-C186B-C186C. S/U grading.

246A-246B-246C. Proseminars: Economic History. (4-4-4) Seminar, three hours. Quarterly seminars for predissertation and dissertation writers. Discussion of advanced topics and recent developments in economic history. Presentation of work-in-progress. Discussion in progress presented, discussed, and criticized by visiting experts, UCLA faculty members, and advanced graduate students. S/U or letter grading.

Public Finance

251A. Theory and Policy of Taxation. (4) Lecture, three hours. Examination of influence of taxation on economic efficiency and incidence of taxation in first part of course. Topics include tax equivalences, Ramsey rules, and alternative forms of taxation. Special tax provisions, tax incentives, and progressivity in taxation in second part of course. S/U or letter grading.

251B. Cost-Benefit Analysis of Public Projects and Programs. (4) Lecture, three hours. Requisite: course 251A. Presentation of those aspects of applied capital theory that are relevant in decisions concerning investment projects in first part of course. Differences between social and private benefits and costs (shadow prices) for foreign exchange, capital, and labor, with applications to public investment decisions in second part of course. S/U or letter grading.

252. Economics of Federalism. (4) Lecture, three hours. Theories of perfect games and social organization. Role of government, collective goods, collective defense, local public goods, spillovers, and intergovernmental relations. S/U or letter grading.

254A–254B–254C. Workshops: Public Economics. (4–4–4) Lecture, three hours. Designed for graduate students. Workshops for advanced graduate students. Students discuss and present research papers. UCLA faculty members, visiting experts. S/U grading.

Applied Microeconomics


251B. Labor Economics II. (4) Lecture, three hours. Requisites: course 251A. Models of life-cycle learning and work behavior, with particular emphasis on recent literature examining labor force behavior and experience of women. S/U or letter grading.

252A–252Z. Topics in Labor Economics. (4 each) Lecture, three hours. Current research in labor economics. Content varies. May be repeated for credit. S/U or letter grading:

252D. Development Economics. (4) Lecture, three hours. Preparation: completion of first-year graduate microeconomics and econometrics courses. Coverage of topics related to tax incidence, deadweight loss, public expenditure, income taxation and transfer programs, with emphasis on impacts of such programs on labor supply and savings, social security, unemployment insurance, and other insurance programs. S/U or letter grading.

253. Topics in Urban Economics. (4) (Formerly numbered 239A.) Lecture, three hours. Current research in urban and regional economics. Content varies. May be repeated for credit. S/U or letter grading.

259A–259B–259C. Workshops: Urban Economics. (4–4–4) Lecture, three hours. Workshops for predissertation and dissertation writers working on empirical issues in areas of labor and population, broadly defined. Presentation of work-in-progress or background methodology, discussion of thesis topics, to be discussed and criticized by faculty and fellow students. Presentation or research paper required. S/U grading.


262A–262Z. Topics in International Economics. (4 each) Lecture, three hours. Current research in international economics. Content varies. May be repeated for credit. S/U or letter grading.

263. Topics in Urban Economics. (4) (Formerly numbered 239A.) Lecture, three hours. Current research in urban and regional economics. Content varies. May be repeated for credit. S/U or letter grading.


265A–265B–265C. Seminars: Labor Economics. (4–4–4) Seminar, three hours. Designed for pre-dissertation and dissertation writers. Overview of most current developments in labor economics for advanced undergraduate and graduate students. Introduction to graduate-level research in this field. Different topic each week, with presentation and discussion of new papers. Research in progress presented, discussed, and criticized by visiting experts. UCLA faculty members, advanced graduate students. Concurrently scheduled with courses C176A–C176B–C176C. S/U (C265B and S/U or letter (C265A, C265C) grading.

266A–266B–266C. Proseminars: Industrial Organization and Regulation. (4–4–4) Seminar, three hours. Quarterly seminars for predissertation and dissertation writers to discuss advanced topics and recent developments in industrial organization and regulation. Presentation of work-in-progress for feedback from faculty and fellow students. Presentation or research paper required. S/U grading.


Industrial Organization


271B. Industrial Organization, Price Policies, and Regulation II. (4) Lecture, three hours. Requisite: course 271A. Study of firm organization and pricing under conditions of less than perfect competition; information costs and advertising; economic and legal analysis of marketing practices such as discrimination, tie-in selling, resale price maintenance, exclusive dealing, and territorial arrangements. S/U or letter grading.


273A. Public Utility Regulation. (4) Lecture, three hours. Theory, practice, and consequences of regulation in electric power, gas, water, telecommunications, broadcasting, and other regulated industries; experiences of unregulated monopoly and public enterprises by way of contrast. S/U or letter grading.

274A–274B–274C. Seminars: Industrial Organization. (4–4–4) Seminar, three hours. Designed for predissertation and dissertation writers. Overview of most current developments in industrial organization for advanced undergraduate and graduate students. Introduction to graduate-level research in this field. Different topic each week, with presentation and discussion of new papers. Research in progress presented, discussed, and criticized by visiting experts. UCLA faculty members, advanced graduate students. Concurrently scheduled with courses C176A–C176B–C176C. S/U (C274B and S/U or letter (C274A, C274C) grading.

International Economics


282A–282Z. Topics in International Economics. (4 each) Lecture, three hours. Current research in international economics. Content varies. May be repeated for credit. S/U or letter grading.


Development Economics


286B. Cost-Benefit Analysis of Development Projects. (4) Lecture, three hours. Requisite: course 286A. Methodology for evaluating investment projects, with special attention to types of issues that arise in developing countries. Discussion of social
287A-287Z. Topics in Development Economics. (4 each) Lecture, three hours. Current research in development economics varies. Courses in sequence not ordinarily given every year. May be repeated for credit. S/U or letter grading.


287B. Economic Development in East Asia. (4) Lecture, three hours. Recent economic history of East Asia focusing on postwar development of Japan, Korea, and China. Emphasis on role of international investment and trade, especially with U.S., in area’s economic development. May be repeated for credit. S/U or letter grading.

287C. Topics in Economic Development. (4) Lecture, three hours. Designed for graduate students. Topics in monetary and exchange rate policy in developing countries. Students expected to develop analytical tools and underlying policy issues. May be repeated for credit. S/U or letter grading.

298A-298B-298C. Proseminars: International and Development Economics I-IV (4-4-4) Seminar, three hours. Quarterly seminars for predissertation and dissertation writers on current issues in international trade and finance and development economics. Presentation of work-in-progress for feedback from faculty and other graduate students. Presentation or research paper required. S/U grading.


297A-297B-297C. Proseminars: Asset Pricing. (4-4-4) Seminar, three hours. Designed for predissertation and dissertation writers on current issues in international trade and finance and development economics. Presentation of work-in-progress for feedback from faculty and other graduate students. Presentation or research paper required. S/U grading.

Teaching Practicum

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel selection as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

Applied Economics (MAE)

401A. Microeconomic Theory. (4) Lecture, three hours. Limited to Master of Applied Economics students. Coverage of fundamentals of optimization, choices by price-taking agents, consumer and producer surplus, monopoly and competition, Walrasian equilibrium and two welfare theorems, constant returns to scale economy, choice over time, uncertainty, and information and market design. Letter grading.

401B. Applied Economics. (4) Lecture, three hours. Limited to upper-division Applied Economics students. How to be sophisticated users and producers of research on issues and policies in several core areas of labor, public, and health economies. Rigorous analyses of core policy questions with cutting-edge empirical analysis. Letter grading.

402A. Macroeconomic Theory. (4) Lecture, three hours. Limited to Master of Applied Economics students. Introduction to major topics of advanced macroeconomics, including macroeconomic data, models of economic growth, supply and demand of factors of production, unemployment, monetary policy and inflation, and fiscal policy and deficits. Letter grading.

402B. Applied Macroeconomics. (4) Lecture, three hours. Limited to Master of Applied Economics students. Study of alternative theories of causes of unemployment and inflation, with focus on Keynesian approach to monetary and fiscal policy and modifications and extensions of Keynesian ideas designed to explain financial crises. Letter grading.

403A. Introduction to Statistical Methods and Econometrics. (4) Lecture, three hours. Limited to Master of Applied Economics students. Introduction to probability, statistics, econometrics, and time-series methods used in economics, business, and government. Topics include random variables, hypothesis testing, estimation, distribution functions, simple and multiple regression, and estimation with stationary/nonstationary processes. Letter grading.


410. Economists in Action. (4) Seminar, three hours. Required of all new teaching assistants. Lecturers from wide spectrum of industrial and corporate big data users. Presentations of their business models for leveraging big data, sharing of data sets, and training students to equip students with hands-on applications using real-world data for current and future big data practitioners—consumers of big data insights for economic applications. Letter grading.


415. Evidenced-Based Policy Analysis in Labor, Public, and Health Economics. (4) Lecture, three hours. Limited to Master of Applied Economics students. Introduction to key policy questions in labor, public, and health economics, including health care, education, unemployment, training programs, and welfare. Economic principles at heart of these topics and main approaches to scientifically evaluate policies that affect them, including data, current case evidence, cutting-edge empirical methods, and their relation to microeconomic theory. Letter grading.

Special Studies

495. Teaching College Economics. (2) Seminar, one hour; laboratory, three hours. Designed for graduate students. Required of all new teaching assistants. Classroom practice in teaching techniques with individual and group instruction on related educational methods, materials, and evaluation. May be repeated for credit. S/U grading.
501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate adviser and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Individual Study. (2 to 8) Tutorial, to be arranged. Directed individual study or research. S/U grading.

597. Individual Study: Graduate Examinations. (2 to 8) Tutorial, to be arranged. Directed individual study in preparation for MA comprehensive examination or PhD qualifying examinations. S/U grading.


EDUCATION

Graduate School of Education and Information Studies

1009 Moore Hall
Box 951521
Los Angeles, CA 90095-1521
310-825-8326
info@gseis.ucla.edu
https://gseis.ucla.edu/education

Christina A. Christie, PhD, Chair

Professors

Walter R. Allen, PhD (Allan Murray Carter Professor of Higher Education)
Alison L. Bailey, EdD
Li Cai, PhD
Mitchell J. Chang, PhD
Christina A. Christie, PhD
Noel D. Enyedy, PhD
Megan L. Franke, PhD
Kimberley Gomez, PhD
Louis M. Gomez, PhD
Sandra H. Graham, PhD (President of Professor of Education and Diversity)
Tyrone C. Howard, PhD
Sylvia Hurtado, PhD
Connie L. Kasari, PhD
Douglas M. Kellner, PhD
Reynaldo F. Macias, PhD
Teresa L. McCarty, PhD (George F. Kneller Professor of Education and Anthropology)
Patricia M. McDonough, PhD
Rashmita S. Mistry, PhD
Pedro A. Noguera, PhD
Marjorie Faulstich Orellana, PhD
Robert A. Rhoads, PhD
John S. Rogers, PhD
William A. Sandoval, PhD
Linda J. Sax, PhD
Michael H. Seltzer, PhD
Daniel G. Solórzano, PhD
Carola E. Suárez-Orozco, PhD
Marcelo M. Suárez-Orozco, PhD (Wasserman Endowed Dean of Education and Information Studies)
Robert T. Teranishi, PhD (Morgan and Helen Chu Professor of Asian American Studies)
Carlos A. Torres, PhD (UNESCO Professor of Global Learning and Global Citizenship Education)
Noreen M. Webb, PhD
Jeffrey J. Wood, PhD

Professors Emeriti

Marvin C. Alkin, EdD
Alexander W. Astin, PhD (Allan Murray Carter Professor Emeritus of Higher Education)
Eva L. Baker, EdD
Gordon L. Berry, EdD
Nicholas G. Blurtone Jones, PhD
James S. Catterall, PhD
Arthur M. Cohen, PhD
Soli Cohen, PhD
Frederick D. Erickson, PhD (George F. Kneller Professor Emeritus of Education and Anthropology)
Norma D. Feshbach, PhD
Patricia C. Galindo, PhD
Simon González, EdD
Kris D. Guitiérrez, PhD
Sandra Harding, PhD
John N. Hawkins, PhD
Charles C. Healy, PhD
Carol Anne Howes, PhD
Barbara K. Keogh, PhD
Marilyn L. Kourilsky, PhD
Peter L. McLaren, PhD
John D. McNiel, EdD
Benj Muthén, PhD
Jeanne L. Oakes, PhD (President/Professor Emeritus of Education Equity)
Gary A. Orfield, PhD
W. James Popham, EdD
Mike A. Rose, PhD
Val D. Rust, PhD
Rodney W. Skager, PhD
Romeria Tidwell, PhD
Concepcion M. Valadez, PhD
Carl Weinberg, EdD
Richard C. Williams, PhD
Welford W. Wilms, PhD
Charles Z. Wilson, PhD

Associate Professors

Robert Cooper III, PhD
Richard Desjardins, PhD
José-Felipe Martínez, PhD
Edith Mukudi Omwamwi, PhD
Thomas M. Phillips, PhD
Cecilia Rios-Aguilar, PhD

Assistant Professors

M. Kevin Eagan, Jr., PhD, in Residence
David G. García, PhD
Jennie K. Grammer, PhD
Lorena Guzmán, PhD
Mark P. Hansen, PhD, in Residence
Jessica C. Harris, PhD
Ozan Jaquette, PhD
Minjeong Jeon, PhD
Matthew J. Madison, PhD
Ananda Drake Marin, PhD
Safiya U. Noble, PhD
Federica Raia, PhD, in Residence
Gerardo Ramirez, PhD

Adjunct Professors

Katherin M. Anderson-Levitt, PhD
Diane Durkin, PhD
Faye C. Peitzman, PhD
Jody Z. Priselac, EdD
Karen Hunter Quartz, PhD
Linda P. Rose, PhD

Scope and Objectives

As one of the top-ranked public graduate programs in education in the nation, the Department of Education is guided by a commitment to integrate theory and practice and to improve educational practice and policy. The department attracts prominent scholars and is internationally recognized for its research centers in evaluation, higher education, child development, and urban education. Whether students choose to pursue a PhD, an EdD, a master's degree, or a services or instructional credential, they graduate with a broad understanding of educational theory and tested practice.

Undergraduate Study

Education Studies Minor

The Education Studies minor is intended to address the diverse information needs of the UCLA undergraduate community to (1) allow students to learn more about the multitude of contemporary professional research issues confronting the field of education, (2) understand the complex interactions between the legal, social, political, and economic forces that influence and shape educational policies in America, (3) provide an introductory course sequence for students who wish eventually to pursue careers in education either as teachers or researchers, and (4) offer an analysis of current educational practices by which UCLA students can become better consumers of educational services as future parents, taxpayers, and citizens.

To enter the minor, students must have completed one minor course from the approved course list, have at least sophomore standing with a minimum overall 2.3 (C+) grade-point average, and file an admission application with the Education Studies academic advisor in the Office of Student Services, 1009 Moore Hall. Applicants are expected to be committed to inquiry of issues central to educational research and practice. Students must follow the program of study in effect at the time of their admission. Students completing their sophomore year are encouraged to apply.

Required Upper-Division Courses (32 units minimum): A minimum of four core courses selected from Education M108, 118 through 138, 149, 187, and M194A, M194B, M194C (to be taken concurrently with either M182A, M182B, M182C or M183A, M183B, M183C) and three additional courses selected from the core courses listed above or from 80, 92A through 92F, M102, M103, M112, 140, 141, 142, 143, 144, M145A, M145B, 146A, 146B, 147, M148, 162, CM178/CM178L, 185, 191A through 191X, 192A/170A, 192B/170B, 196C.

Only one course from Education 80 and 92A through 92F may be applied toward the elective requirement. Courses CM178/CM178L, 192A/170A, and 192B/170B must be taken concurrently.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.
Graduate Degrees

The Department of Education offers Master of Arts (MA) and Doctor of Philosophy (PhD) degrees in Education, Master of Education (MEd) degree, Doctor of Education (EdD) degree, Doctor of Philosophy (PhD) degree in Special Education (with California State University, Los Angeles), and Doctor of Education (EdD) degree in Educational Administration (with UC Irvine).

One articulated degree program (Education MEd/Latin American Studies MA) and one concurrent degree program (Education MEd, MA, EdD, or PhD/Law JD) are also offered.

Education

Lower-Division Courses

10. Introduction to Humanities, Social Sciences, and Scientific Inquiry. (4) Lecture, 30 hours: laboratory, eight hours. Introduction to range of critical concepts in humanities, social sciences, and hard sciences. Use of multicultural texts that represent variety of genres and disciplines to develop critical reading and writing skills. Development of scientific inquiry skills relevant to study of mathematics and science in medical professions. Weekly compositions, creative thinking journals, and participation in laboratory experiments. Application of these concepts to critical issues facing migrant farmworker communities and similar groups throughout state and country, with focus on issues such as identity, language, culture, and central social, health, and educational issues facing Latino community. Offered in summer only. P/NP or letter grading.

80. Understanding Collegiate Experience. (4) Lecture, three hours; discussion, 90 minutes. Designed to help students better understand their experiences within college environment by learning about research that has been done on college students and impact of college. Examination of diverse issues ranging from reasons why students go to college to how students are ultimately influenced by college experience. Letter grading.

85A-85B-85C. Evaluation for Practitioners. (1-1-2) Tutorial, one hour. Provides participating Student Initiats Accountability Program staff with basic understanding of evaluation skills. Students learn how to describe programs in terms of inputs, activities, outputs, and outcomes and are able to frame relevant and measurable evaluation questions based on program needs. P/NP grading.


92B. Practicum in Higher Education. (4) Seminar, three hours. Enforced requisites: courses 92A, 92F. Examination of intellectual and personal development of college students through differential environments and instructional experiences. Letter grading.

92C. Dynamics of Peer Mentoring. (4) Seminar, three hours. First course in series of three designed to provide proficiency in learning principles and procedures relevant to peer mentoring. Undergraduate students present College of Letters and Science academic support workshops to their peers with an emphasis on peer mentoring, with special emphasis on enhancing academic and career perspectives. Concentration on relationship between creativity and presentation. P/NP or letter grading.

92E. Evaluation of Peer Mentoring. (4) Seminar, three hours. Requisite: course 92D. Third course in series of three designed to provide proficiency and principles and procedures relevant to peer mentoring. Undergraduate students present College of Letters and Science academic support workshops to their peers with an emphasis on peer mentoring, with special emphasis on enhancing academic and career perspectives. Concentration on relationship between creativity and presentation. P/NP or letter grading.

92F. Academic Success in Undergraduate Experience. (2) Lecture, one hour; discussion, one hour. Designed for first-year students to provide strategies to improve understanding of factors involved in making adjustments to college experience, both academic and social. Letter grading.

98. Critical Issues in Education. (4) Seminar, 30 minutes; laboratory, 30 minutes. Introduction to critical educational issues and approaches taken by researchers, policymakers, and education advocates as they respond to these issues. Laboratory portion of course engages students in small groups where they acquire background on particular issue of interest, learn about social sciences research, and conduct mini-research projects. May be repeated for credit. Letter grading.

Upper-Division Courses

M102. Mexican Americans and Schools. (4) Same as Chicana and Chicano Studies M102.) Seminar, four hours. Themes as Asian and Chicano Studies M114.) Seminar, four hours. Examination of Chicano Chicano educational issues in U.S., with special emphasis on disentangling effects of race, gender, class, and immigrant status on Chicana/Chicano educative attainment and achievement. Examination of how historical, social, political, and economic forces impact Chicana/Chicano educational experience. P/NP or letter grading.

M103. Asian American Education and Schooling. (4) Same as Asian and Chicano Studies M114.) Seminar, four hours. Examination of existing body of research from various disciplines on Asian/Pacific American educational experiences. Letter grading.

M104. Introduction to Arts Education for Multiple Publics: Theory and Practice. (4) (Same as Arts Education M102.) Seminar, three hours; outside study, nine hours. Introductory course with focus on arts education for multiple publics in inner-city settings. Study of current issues in creativity, and social justice as students develop, implement, and assess original syllabi, lesson plans, and community learning projects for multiple publics in inner-city schools and arts/education partnerships with partner schools in planning, teaching, and evaluation of arts education programs in dance, music, theater, and visual arts. P/NP or letter grading.

M108. Sociology of Education. (5) (Same as Sociology M175.) Lecture, four hours; discussion, one hour. Study of how U.S. educational system both promotes socioeconomic opportunities and maintains socioeconomic inequalities; historical and theoretical perspectives on role of education in U.S. society; trends in educational attainment; ways in which family background, class, race, and gender affect educational attainment; and focus on theories of culture, cultural transmission and implementation; and focus on Freireian pedagogy. Concurrently scheduled with course C209A. Letter grading.

C125. Politics of Education. (5) Lecture, two hours; discussion, two hours. Political dimensions of education institutions as organizations. Relationships between education institutions and political institutions in society. Political theory as foundation for public policy analysis; interest group perspectives on public policy formation and implementation; and focus on Freireian pedagogy. Concurrently scheduled with course C207. P/NP or letter grading.

C126. Educational Anthropology. (5) Seminar, four hours. Research seminar designed to familiarize students with discipline of anthropology and subfield of anthropology and education. Exploration of concept of education throughout various cultures and societies, with focus on theories of culture, cultural transmission and acquisition, and cultural reproduction and production for understanding schooling and its outcomes. Examination of research methodologies in anthropology, as well as critical historical overview of discipline and current debates and dilemmas of doing anthropological research in educational settings. Issues such as race, gender, culture, social class, and consideration of application of anthropological
127. Educational Psychology. (5)
Lecture, two hours; discussion, two hours. Study of autism spectrum disorders (ASD) and related disabilities. Students learn how to understand the impact of ASD on families. Limited number of independent observations of individuals in community required. Letter grading.

131. Issues in American Education: Perspectives from History and Popular Culture. (4) Seminar, four hours. Exploration of ways we draw on different kinds of texts to illuminate critical issues in American secondary education. Issues include transformation in secondary education from 1890 to present, politics of school choice, and racial and gender representation of secondary education. Letter grading.

132. Autism: Mind, Brain, and Education. (5) Lecture, two hours; discussion, two hours. Study of autism spectrum disorders (ASD) and related disabilities. Discussion of characteristics of disorder, effective interventions, and exploration of impact of children with ASD on families. Limited number of independent observations of individuals in community required. Letter grading.

133. Topics in Child Development and Social Policies. (5) Seminar, four hours; fieldwork, two hours. Research seminar designed to enable students to (1) gain basic understanding of ways in which public policies are developed and implemented, (2) learn about the landscape in several major domains of child and family life in U.S. and other countries, and (3) use scientific research on children’s cognitive and social development to evaluate and understand effects of social and economic policies. Letter grading.

134. Educational Leadership, Organizational Theory, and Policy. (5) Seminar, four hours. Designed for students interested in developing understanding and appreciation for broad range of leadership models/theories in education, including traditional, entrepreneurial, behavioral, and relationship-based models. Analysis of effectiveness of organizations and/or policies in terms of educational leadership, and development of personal leadership profile in context of alternative models of leadership relevant to education. Letter grading.

135. Introduction to Educational Inquiry. (5) Seminar, five hours. Limited to juniors/seniors. Introduction to educational inquiry, with special attention to different ways of conducting research in field of education. Focus on different ways authors conceptualize/interpret research and Development of culminating project. Letter grading.

M136. Working Families and Educational Inequalities in Urban Schools. (4) (Same as Labor and Workplace Studies M136.) Seminar, three hours; fieldwork, five hours. Exploration of complex relationship between working-class and poor communities and inequalities in American urban schools. This class asks multiple disciplinary frameworks that address issues of race, ethnicity, and immigration. Viewed as sites where inequalities are produced and resisted. Review of history of exclusionary treatment and divergent ways social researchers have used to understand notion of inequality, access to quality public education, and how race, ethnicity, and class affect school experiences for working-class and poor communities. Look inside schools through community service learning to opportunity to examine systems, structures, and everyday practices that sustain and reproduce inequality and policies that intend to remedy these wrongs in urban settings. Opportunity to investigate issues of working-class families and inequalities as they relate to students’ own communities and experiences. P/NP or letter grading.

137. Public Policy in Higher Education. (5) Lecture, four hours. Introduction to range of contemporary and ongoing higher education policy public issues, and conceptual and theoretical frameworks typically used to understand them. Development of fluidity in public policy language, with focus on national, state, and institutional policy perspectives. Letter grading.

138. Critical Pedagogy and Cultural Studies in Urban Education. (5) Lecture, two hours; discussion, two hours. Course explores theoretical frameworks and empirical work in critical pedagogy and cultural studies to inform, confront, and transform many challenges faced in urban education today. Study of theory and research of critical pedagogues such as Paulo Freire, Peter McLaren, and others. Letter grading.

139. Educational Program Evaluation. (5) Seminar, four hours. Stages and methods for conducting evaluations of educational and social programs, with emphasis on evaluation approaches that are theoretically grounded, methodologically rigorous, practical, and useful. Letter grading.

140. Time and Behavior in Educational Organizations. (4) Seminar, three hours. Designed for juniors/seniors. Exploration of psychosocial perspective of how temporal orientation and time investments impact academic performance. Students will analyze the specific emphasis of educational issues related to school reform, teen pregnancy, school violence, teacher burnout, teacher midlife crisis, cultural diversity, information-seeking behaviors, and academic attainment. Letter grading.

141. Writing to Learn: Teaching Writing in Elementary and Secondary Schools. (4) Seminar, four hours. Ways to teach writing at elementary and secondary level. Student will develop and complete a major writing project. Letter grading.

142. Reflections of Education Abroad Program Study. (4) Seminar, two hours; activity, two hours. Designed to provide returned Education Abroad Program students with opportunity to analyze their transition to UCLA and to engage with peers and UCLA students in analysis of what might be done to make things better for all persons. Letter grading.

144. Advanced Undergraduate Research Seminar. (4) Seminar, four hours. Limited to juniors/seniors. Advanced independent skills course of joint interest to professional and student advisor with K-12 American educational experience, with specific emphasis on diversity, assessment, technology, at-risk, geographical space, and psychosocial development of children. Letter grading.

M145A-M145B. Restoring Civility: Understanding, Using, and Resolving Conflict. (4) (Same as Chicana and Chicano Studies M145A-M145B.) Lecture, one hour; discussion, three hours. Course M145A is enforced requisite to M145B. Designed for students who want to learn principles of dialogue and media- tion, as alternatives to violence, and practice how to apply ones courses and build community. In Progress (M145A) and letter (M145B) grading.

M145C. Alternatives to Violence: Peer Mediation in Public Schools. (4) (Same as Chicana and Chicano Studies M174C.) Lecture, one hour; fieldwork, three hours. Required: coursework toward major. Limited to juniors/seniors. Application of student knowledge and experience to help students in partner schools to develop peer mediation programs to be sustained by future UC students. Work at partner school sites and demonstration of firm grasp of concepts of conflict resolution through weekly reflective journals, discussion through bimonthly meetings, and final journal entry. Application of critical thinking, review of literature from earlier courses, and reflection on student field experiences to deepen understanding of violence, its causes, and what schools can do to mitigate it. Letter grading.

146A. Research Apprenticeship in Peer Counseling. (4) Seminar, four hours. Limited to juniors/seniors. Highly interactive, student-centered course designed to provide hands-on experience in academic peer advising and leadership understanding of underlying theories, principles, and related issues. Students advise their peers in Education Studies minor courses and build community among those students. Letter grading.

146B. Research Apprenticeship in Peer Advising and Leadership. (4) Seminar, four hours. Enforced requisite course 146A. Limited to juniors/seniors. Highly interactive, student-centered course designed to provide hands-on experience in academic peer advising and leadership understanding of underlying theories, principles, and related issues. Students advise their peers in Education Studies minor courses and build community among those students. Letter grading.

147. Lesbian, Gay, Bisexual, and Transgender Issues in Education and Law. (4) Lecture, four hours. Lessons, gay, bisexual, and transgender-related con- troversies that arise in schools, colleges, and universi- ties today and how they are being addressed by legal and education communities. In particular, examination of real-life consequences of school laws and exploration of what might be done to make things better for all persons. Letter grading.

M148. Women in Higher Education. (4) (Same as Gender Studies M148.) Seminar, three hours. Designed for juniors/seniors. Overview of issues related to experience of women in higher education. Topics include curricular transformation, feminist pedagogy, women’s studies opportunities, and intersection of gender and race. Letter grading.

149. Innovation and Social Entrepreneurship in Education. (5) Lecture, two hours; laboratory, two hours. Exploration of various types of charter schools as well as alternative methods for school change. Evaluation of in-depth social entrepreneurship, its theoretical constructs, and its application to charter schools as social enterprises. Letter grading.
150. Student Development in Theory and Practice. (2) Seminar, two hours. Introduction to field of student affairs and contribution of student development theory. General overview of various student affairs functions and programs, along with key theories that inform practice. P/NP grading.

151. Student Development in Theory and Practice: Strategic Career Decision Making. (2) Seminar, two hours. Importance of making informed career decisions and utilizing resources for cultural and financial values. Letter grading.

C160. Theory and Practice of Intergroup Dialogue: Building Facilitation Skills. (4) Seminar, four hours. Topics include social psychology of intergroup relations, intercultural and dialogic communication theories, methods for reconciling and bridging differences in schools and communities, research and evaluation of intergroup dialogues and other educational methodologies, and the values that necessarily involve understanding of new technologies and media forms. Study of both theory and production techniques to inform student analysis of media and critical media literacy projects. Concur- rently scheduled with course CM278. Letter grading.


M182A. Language, Literacy, and Human Development Ethnography. (2) (Same as African American Studies M182A) Fieldwork, three hours. Enforced corequisite: course M194A. Students visit after-school site on weekly basis and use eth- nographic methods to document learning. Opportunity for students to connect theories of development and language and literacy learning with practice. Letter grading.

M182B. Culture, Gender, and Human Development Ethnography. (2) (Same as African American Studies M182B.) Fieldwork, three hours. Enforced corequisite: course M194B. Students visit after-school site on weekly basis and use ethno- graphic methods to document learning. Opportunity for students to connect theories of development and language and literacy learning with practice. Letter grading.

M183A. Language, Literacy, and Human Development Ethnography. (3) (Same as African American Studies M183A) Fieldwork, six hours. Enforced corequisite: course M194A. Students visit after-school site on weekly basis and use ethno- graphic methods to document learning. Opportunity for students to connect theories of development and language and literacy learning with practice. Letter grading.

M183B. Culture, Gender, and Human Development Ethnography. (3) (Same as African American Studies M183B) Fieldwork, six hours. Enforced corequisite: course M194B. Students visit after-school site on weekly basis and use ethno- graphic methods to document learning. Opportunity for students to connect theories of development and language and literacy learning with practice. Letter grading.

M184. Variable Topics in Teaching and Learning. (1) Lecture, one hour. Variable topics course, with emphasis on theories of teaching and learning, con- necting them to instructional activities for students in various learning settings, including libraries and schools. P/NP grading.

185. Community Service Learning for Academic Achievement. (4) Lecture, two hours; discussion, two hours. Must be taken prior to course 192A. Emphasis on cognitive learning and motivation theories and their relevance to strategies for developing curricular instructional techniques and training that contribute to tutoring, counseling, and other instructional assis- tance in various school settings. P/NP or letter grading.

186. Variable Topics in Education. (5) Seminar, five hours. Limited to juniors/seniors. Variable topics course organized around disciplinary knowledge central to the development of research, educa- tional and learning processes, phenomenon, policies, methods, and instruction. Development of culmi- nating project. Consult Schedule of Classes for topics and instructors. May be applied as core credit for Edu- cation Studies minor students. May be repeated three times for credit. Letter grading.

M190. Arts Education Undergraduate Practicum: Preparation, Observation, and Practice. (4) (Same as Arts Education M190) Seminar, three hours. En- forced requisite: course M104. Limited to juniors/se- niors. Training and supervised practicum for advanced undergraduate students participating in Visual and Performing Arts Education minor. Students im- plement and evaluate original arts education pro- grams under guidance of faculty members in small course settings. P/NP or letter grading.

M190SL. Arts Education Undergraduate Practi- cum: Experiential Learning: America Reads. (2) Seminar, three hours; practicum, three hours; outside study, six hours. Enforced requi- sites: courses M104, M190. Limited to juniors/se- niors. Continuation of arts education training and sup- ervised practicum for advanced undergraduate students participating in Visual and Performing Arts Education minor. Students continue to implement and evaluate original arts education programs under guid- ance of faculty members and designated guiding teachers in K-12 public school settings. May be re- peated for credit with consent of instructor. P/NP or letter grading.

191A-191X. Current Issues in Education. (4 each) Seminar, four hours. Limited to juniors/seniors. Variable topics course organized on selected current is- sues basis, integrating field observations and read- ings through seminar and research, culminating in a project. Consult Schedule of Classes for topics and instructors. May be repeated for credit. Letter grading.

192A. Undergraduate Practicum in Community-Based Outreach Programs. (2) Seminar, two hours. Enforced corequisite: course 185. Limited to juniors/seniors. Training and super- vised practicum for advanced undergraduate stu- dents to study learning and developmental factors as well as cultural, social, and environmental factors that affect student academic achievement. Exploration, training, and application of strategies that enable students to become more effective learners. Letter grading.

192B. Undergraduate Practicum in America Reads. (2) Seminar, two hours. Enforced corequisite: course 186. Limited to juniors/seniors. Training and super- vised practicum for advanced undergraduate stu- dents that provides opportunity to reflect on both content and experience pertaining to America Reads sites. Letter grading.

193Y-193Z. High School Advising Program. (4-4) Discussion, two hours; fieldwork, five hours. Service learning courses designed to provide students with information and techniques sufficient to allow them to undertake academic advising in low socioeconomic high schools. Letter grading.

M194A. Language, Literacy, and Human Develop- ment Research Group Seminars. (5) (Same as Af- rican American Studies M194A) Seminar, three hours; laboratory, two hours (when scheduled). Enforced corequisite: course M182B or M183A. Research seminar designed to provide opportunity to combine theory and practice in study of human development in educational contexts. Focus on relationship between theories of development, culture, and language. May be taken independently for credit. Letter grading.

M194B. Culture, Gender, and Human Development Research Group Seminars. (5) (Same as African American Studies M194B) Seminar, three hours; laboratory, two hours (when scheduled). Enforced corequisite: course M182B or M183B. Research seminar designed to provide opportunity to combine theory and practice in study of human development in educational contexts. Focus on relationship between theories of development, culture, and language. May be taken independently for credit. Letter grading.

M194C. Culture, Communications, and Human De- velopment Research Group Seminars. (5) (Same as African American Studies M194C) Seminar, three hours; laboratory, two hours (when scheduled). En-
forced conceptwise: course M192C or M193C. Research seminar designed to provide opportunity to combine theory and practice in study of human development in educational contexts. Focus on relationships between theories of development, culture, and technologies. May be taken independently for credit. Letter grading.

195. Community Internships in Education. (4) Tutorial, one hour; fieldwork, eight to 10 hours. Internship in K-16 schools or community to be supervised by Center for Community Learning and faculty sponsor. Students meet biweekly with teaching assistant, write reflective journals, and prepare final paper. May be repeated for credit. Individual contract with supervising faculty member required. Letter grading.

195CE. Community or Corporate Internships in Education. (4) Tutorial, one hour; fieldwork, eight to 10 hours. Limited to juniors/seniors. Internship in supervised preapproved K-12 settings coordinated through Center for Community Learning. Students meet on regular basis with faculty sponsor or designee to construct series of reading and writing assignments that examine educational issues related to meaningful work at internship site. Students expected to learn ways in which urban schools are structured, organized, and operate. May be repeated for credit. Individual contract with supervising faculty member required. P/NP or letter grading.

196C. Instructional Apprenticeship in Teaching and Learning at UCLA Lab School. (4) Tutorial, 10 hours. Limited to juniors/seniors. Training and supervised fieldwork in advanced undergraduate students at UCLA Lab School (Corinne A. Seeds campus), K-6 elementary school on UCLA campus. Students gain understanding of innovative educational techniques that go into teaching and learning at UCLA Lab School through seminars, readings, observations, and discussions. Individual meetings with faculty mentor throughout term. May be repeated for credit. Individual contract required. Letter grading.

196D. Instructional Apprenticeship in Teaching and Learning at UCLA Partner Schools. (4) Tutorial, 10 hours. Limited to juniors/seniors. Introduction to K-12 teaching profession through training and supervised off-campus experiences at UCLA partner schools (Nora Stern Elementary School, Brockton Elementary School, Emerson Middle School, University High School, UCLA Community School, or other LAUSD schools coordinated by students). Students gain grounded understanding of social issues in education through readings, observations, direct support in classroom activities, and field experiences. Individual meetings with faculty mentor throughout term. May be repeated for credit. Individual contract required. Letter grading.

196R. Research Apprenticeship in Education. (2 to 4) Tutorial, three hours per week per unit. Limited to juniors/seniors. Entry-level research apprenticeship for upper-division students under guidance of faculty member. May be repeated for credit. Individual contract required. P/NP grading.

197. Individual Studies in Education. (2 to 4) Tutorial, four hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assignment of course credit requires a written statement of subject matter required. May be repeated for credit. Individual contract required. P/NP grading.

199. Directed Research or Senior Project in Education. (2 to 4) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200A. Historical Research and Writing. (4) Lecture, four hours. Methods of historical research and writing for students who will be engaged in research and in report or paper or thesis writing, regardless of their field of interest. S/U or letter grading.


200C. Analysis of Survey Data in Education. (4) Lecture, four hours: laboratory, two. Taught during spring of odd-numbered years. Requisites: course 200B. Introduction to techniques of processing and analyzing nonexperimental and quasi-experimental quantitative data. S/U or letter grading.


202C. History of American Education. (4) Same as History M204. (4) Discussion, three hours. History of educational thought and social forces impacting on American education from 1880s to present. Analysis of relations between these ideas and forces, and aims and practices of American education today. S/U or letter grading.

202D. Evaluation Theory. (4) Lecture, four hours. Prevalent evaluation theories, systems for categorizing these theories, and process of theory development in educational evaluation. S/U or letter grading.

203. Educational Measurement 1. (5) Seminar, four hours. Research seminar designed to familiarize students with discipline of anthropology and subfield of anthropology and education. Exploration of concept of culture, cultural transmission and acquisition, and cultural reproduction and production for understanding schooling and its outcomes. Examination of research methodologies in anthropology, as well as critical historical overview of discipline and current debates and dilemmas of doing anthropological research in educational settings. Issues of race, gender, sexual orientation, and class, and consideration of application of anthropological theory and methods to educational practice and research. Concurrently scheduled with course C126. Letter grading.

204A. Introduction to Education and Social Sciences. (4) Lecture, four hours. Interdisciplinary course intended to introduce students to study of educational issues, texts, and movements of thought through social sciences and comparative perspectives. S/U or letter grading.

204B. Introduction to Comparative Education. (4) Lecture, four hours. Examination of conceptual and methodological questions underlying comparative education, with emphasis on development of field and to styles of social analysis that may be applied to comparative and cross-national studies in education. S/U or letter grading.

204C. Education and National Development. (4) Lecture, four hours. Designed for graduate students. Analysis of various social sciences perspectives and methodologies (including modernization, dependency, Marxist, neo-Marxist, liberation theory, and world-system theories of change and development) and changing notions of role of education in developement of less-industrialized countries of world. S/U or letter grading.

204D. Minority Education in Cross-Cultural Perspective. (4) Lecture, four hours. Historical and contemporary analysis of educational policies with regard to ethnic, religious, and linguistic minorities through selected national and international case studies. Focus on cross-cultural education in representative countries in relation to social, political, and economic systems. S/U or letter grading.

204E. International Efforts in Education. (4) Lecture, four hours. Comparative and international study of organized and systematic educational activity for children, youth, and adults carried on outside of schools. Types of programs include, among others, community-based learning, community action, skill development, literacy, and extension programs. S/U or letter grading.

205. Computers in Educational Process. (4) Lecture, four hours. Introduction to theory, experimentation, evaluation, and future of computer systems in education with emphasis on computer-assisted instruction (CAI), and use of computers to teach programming and to foster development of writing, computational, and filing skills. S/U or letter grading.

206A. Philosophy of Education: Introduction. (4) Lecture, four hours. Systematic introduction to field, indicating ways in which philosophy serves to elucidate educational aims, content, methods, and values. S/U or letter grading.

207. Politics of Education. (5) Lecture, two hours; discussion, two hours. Political dimensions of educational institutions as organizations. Relationships between educational institutions and political institutions in society. Political theory as foundation for public policy analysis; interest groups in education policy formation and implementation; and focus on Freirean pedagogy. Concurrently scheduled with course C125. S/U or letter grading.

208A. Perspectives on Sociology of Education. (4) Lecture, four hours. Sociological perspectives on current issues in educational policy and practice, including desegregation, decentralization, equality of educational opportunity, and the relationship between organizations, teacher/student relationships, reform in education at elementary, secondary, postsecondary levels. S/U or letter grading.

208B. Urban Education, Anthropology, and Education. (4) Seminar, four hours. Exploration of experiences of immigrant youth in U.S. schools, with focus on language, culture, and educational equity in urban settings. Letter grading.

208C. Explanation in Social Sciences and Educational Research. (4) Lecture, two hours; discussion, two hours. Designed for graduate students. Overview of basic strategies and forms of explanation relevant to inquiry in education drawn from vantage point of various social and behavioral sciences disciplines. S/U or letter grading.

209A. History of Higher Education. (5) Seminar, four hours. Exploration of major eras in history of higher education. Topics include issues concerning access, diversity, parental choice, cultural literacy, teacher empowerment, and role of popular media. Concurrently scheduled with course C124. S/U or letter grading.

209C. Research and Evaluation in Higher Education. (4) Lecture, four hours. Development of conceptual and practical understanding of research and evaluation in higher education, including basic statistics, survey design, data analysis, assessment issues, and research proposal writing. Letter grading.

210. Education as Profession: Theory, Research, and Practice. (4) Lecture, 90 minutes; discussion, two and one-half hours. Introduction to major issues and approaches in educational research through studies of faculty presentations, selected readings, and writing assignments. Letter grading.

211A. Educational and Psychological Measurement. (4) Lecture, Theory, and Practical Practice. (4) Lecture, four hours. Requisites: course 211A or 211B or 211C or Psychology 255A, Psychology 255B. Review of standard item response theory models, multidimensional models, multiple group models and models with covariates, item and person parameter estimation, dif-
ferential item functioning analysis, testing model fit, linking and scale alignment, computerized adaptive testing. S/U or letter grading.

212A. Learning and Education. (4) Lecture, four hours. Models of learning, modeling, reinforcement, motivation, memory, transfer, individual differences, and instruction. S/U or letter grading.

212B. Motivation and Affect in Educational Process. (4) Lecture, four hours. Review of theoretical and empirical literature on motivational factors in school settings and conditions for acquisition of affective outcomes. S/U or letter grading.

213C. Group Counseling Theory and Process. (4) Lecture, three hours; discussion, one hour. Requisite: course 411A. Group productivity, leadership in groups, conflict formation, and the effect of behavior changes in individuals and groups. Evaluation of social, psychological, and educational principles related to therapeutic experiences of individuals in small groups. Letter grading.

213D. Assessment in Counseling and Student Affairs. (4) Lecture, four hours. Overview of assessment issues and methods used in counseling and student affairs activities, including testing, measurement, applications of measurement theory, and contemporary issues that are significant in influencing assessment in student affairs programs. Letter grading.

214A. Counseling Theory and Practice. (4) Lecture, four hours. Alternatives in counseling practice in relation to theories of personality development and functioning, research on effectiveness of counseling, professional issues in counseling, educational aspects of counseling. S/U or letter grading.

214C. American Professoriate: Faculty Status, Role, and Performance. (4) Discussion, four hours. Historical and contemporary issues involving American professoriate. Topics include employment, academic culture, teaching and research, reward structure, faculty development. Letter grading.


214F. Student Problems: Social Context. (4) Lecture, four hours. Designed to assist students in understanding configuration of social forces that lead to student dysfunctions. Consideration of number of contemporary social problems that are of concern to school counselors, educators in general, and behavioral scientists. S/U or letter grading.

215. Personality, Motivation, and Attribution. (4) (Same as Psychology M239.) Discussion, three hours. Current research and theory relating personality variables (e.g., openness, personality) to self-esteem and emotional concerns such as persistence and intensity of behavior. Perceived causes of outcomes in achievement and affiliative domains. S/U or letter grading.


217A. Social Development and Education. (4) Seminar, four hours. Biological and familial, school, and other influences on children; development in context of current research and theoretical models; consideration of the methodological research on family, peer group, and school; application of developmental theory and research to educational practice. S/U or letter grading.

217B. Cognitive Development and Education. (4) Lecture, two hours; discussion, two hours. Designed for graduate students. Critical review of theories and research in cognitive development, with focus on work of Piaget and Vygotsky, and relation of this work to issues in educational practice. S/U or letter grading.

217C. Personality Development and Education. (4) (Same as Psychology M245.) Lecture, four hours. Review of research and theory of critical content areas in personality development that bear on school performance: achievement motivation, self-concept, aggression, social behaviors, and other social behaviors; review of status of emotional behavior in personality theory and development. S/U or letter grading.

217D. Language Development and Education. (4) Lecture, four hours. Research and theory on how children develop their first language; sociolinguistic and psycholinguistic issues in preschool and primary years; bilingual and dialectal issues. S/U or letter grading.

217E. Emerging into Adulthood. (4) Seminar, four hours. Examination of theories and research related to transition to adulthood and role of race/ethnicity, gender, and immigration status in shaping development. Topics include historical and cross-cultural comparisons of emerging adulthood; ethnic, racial, and gender identity; family relationships and expectations; college opportunities and experiences; entering workforce; alternative pathways (incarceration and military); and civic engagement. Letter grading.

217F. Adolescent Development. (4) (Same as Psychology M242G.) Seminar, four hours. Designed for graduate students. Review of research on physical, cognitive, social, and psychological development during second decade of life. Topics include pubertal development, changes in parent/adolescent relationships, role development, high-risk behaviors, stress and coping, and school adjustment. Letter grading.


218. Measurement of Educational Achievement and Aptitude. (4) (Same as Psychology 230A.) Lecture, four hours. Critical analysis of issues in reconstitution of schooling; concepts of function and structure of schooling; organization theory; systems approaches in analysis of organization; research methodology; S/U or letter grading.

219. Laboratory: Advanced Topics in Research Methodology. (4) Laboratory, four hours. Provides assistance in design of research and interpretation of data to advanced students from other divisions. Coverage of special topics not included in other courses on research methods. S/U or letter grading.


221. Computer Analyses of Empirical Data in Education. (4) Lecture, two hours; laboratory, two hours. Requisites: courses 209C (section 1), 230A. Designed to develop conceptual and technical skills needed for designing and executing empirical research utilizing statistical packages. Each student conducts two original studies. Equal emphasis on techniques of data analysis and interpretation of results. S/U or letter grading.

222A. Introduction to Qualitative Methods and Design Issues in Educational Research. (4) Lecture, three hours; discussion, one hour. Introductory course for students interested in epistemology, theories, and styles of qualitative research settings. Theory and practice of naturalistic, qualitative research design covered in second half of course. Letter grading.

222B. Participant-Observation Field Methods. (4) Lecture, two hours; discussion, two hours. Requisite: course 222A. First of two courses on participant-observation field methods. Key skills (e.g., observation, recording, interviewing, role management, data storage) learned through classroom lectures and simulations, and by conducting actual field-based research project. Letter grading.

222C. Qualitative Data Reduction and Analysis. (4) Lecture, two hours; discussion, two hours. Requisite: course 222B. Continuation of fieldwork project started in course 222B, with focus on practical skills and conceptual/methodological issues involved in data reduction and analyzing qualitative data. Letter grading.

222D. Qualitative Inquiry: Special Topics. (4) Lecture, four hours. Special topics course on some field or aspect of qualitative inquiry. Topics may include classroom ethnography, advanced ethnographic writing and/or multimedia design, discourse analysis, and microethnography of social interaction. S/U or letter grading.


224. Problems and Issues in Bilingual and Multicultural Education. (4) Lecture, two hours; discussion, one hour. Introduction to development and implementation of bilingual and multicultural programs in U.S. Analysis of program goals, models, typologies, and effectiveness. S/U or letter grading.

225. Issues in Education of Exceptional Individuals. (4) Lecture, four hours. Designed for graduate students. Analysis of major research concerning contemporary trends, issues, and programs for exceptional individuals; consideration of commonalities and differences among exceptional individuals. S/U or letter grading.

225B. Advanced Issues in Education of Exceptional Individuals. (4) Lecture, four hours. Synthesis of developmental and educational theory relevant to study of exceptional individuals, including consideration of historical context of current research and applied issues in special education. S/U or letter grading.

226. Seminar: Special Topics in Writing, Rhetoric, and Educational Methodology. (4) Seminar, four hours. Special topics seminar on writing in education that could focus on history of writing about education, social and political dimensions of it, its variation by discipline, and its uses in professional and public contexts. Letter grading.

227A. Research on Learning Characteristics of Exceptional Individuals. (4) Lecture, four hours. Requisite: course 222B. Overview of research and theory regarding learning characteristics of exceptional individuals and discussion of application of this work to educational practice. S/U or letter grading.


227C. Research on Behavioral and Social Characteristics of Exceptional Individuals. (4) Lecture, four hours. Requisite: course 222B. Overview of research in emotional and emotional development of exceptional individuals and development of social competence in special education programs. S/U or letter grading.

228. Observation Methods and Longitudinal Studies. (4) Lecture, two hours; discussion, two hours. Requisite: course 230A. Design of observational and longitudinal studies. Formulation of study conclusions concerning influences on children’s development. Conduct of observations; processing and analysis of data. Use of portable computers for recording observations. S/U or letter grading.
229. Seminar: Special Topics in Urban Schooling. (4) Lecture, four hours. Research on selected topics in fields of administration, policy, curriculum, and teaching studies and on conceptualization of hypoth- eses and research programs on division topics and is- sues. Letter grading.


231D. Advanced Quantitative Models in Nonexperimen- tal Research: Multilevel Analysis. (4) Lecture, four hours. Requisites: courses 230B, 230C. Exam- ination of conceptual, substantive, and methodolog- ical issues in analyzing multilevel data (i.e., on individ- uals in organizational settings such as schools, cor- porations, hospitals, communities); consideration of alternative analytical models. Letter grading.

M231E. Statistical Analysis with Latent Variables. (4) (Same as Statistics M244.) Lecture, three hours. Requisites: courses 231A, M231B. Extends path anal- ysis (Leaves the data behind) to latent-variables with measurement errors and multiple indicators of latent variables. Confirmatory factor analysis, covariance structure modeling, and multiple-group analysis. Identification, identification, and model building considerations. Letter grading.


232. Instructional Writing in Education. (4) Lecture, four hours. Intended to assist in professional develop- ment as writers, with focus on style and organization, scholarly genres, modes of discourse, and broader is- sues of conceptualization and method. Letter grading.

233. Professional Writing in Education. (4) Lecture, four hours. Emphasis on such equity-related issues as desegrega- tion and school-family connections. S/U or letter grading.

234. Critical Perspectives on Economic Approach- es to Education. (4) Seminar, four hours. Introduction to concepts and principles in economics of education using critical perspective. Overview of evolving rela- tionship between education and economics, including growing use of education as economic policy tool and increased role of economic principles in internal func- tioning of educational systems. S/U or letter grading.

235. Comparative Political Economy of Education and Skills. (4) Seminar, four hours. Use of political economy of education perspective for exploring, at international and comparative levels, link between al- ternative modernization theories, economic consideration for financing education and training systems and impact of alternatives on outcomes such as unequal chances to learn, types of skill formation, and well-being. S/U or letter grading.


237. Law and Urban Education. (4) Lecture, four hours. Examination of recent legal controversies that mandate educators to meet needs of students in multicultural society, with special em- phasis on such equity-related issues as desegrega- tion, school finance, standardized testing, and rights of language minority students. Letter grading.

238. Cross-National Analysis of Higher Education. (4) Lecture, four hours. Comparative study of national systems of higher education: their division of work, basic values, structures of authority, modes of na- tional integration, and types of change. S/U or letter grading.

239. Organization and Governance of Educational Systems. (4) Lecture, four hours. Academic organiza- tions, precollegiate and postsecondary, are most ap- propriate for study as complex, professionally or- ganizations. Emphasis on characteristics of educa- tional institutions and systems as organizations: environmental relations, governance structures, pro- cesses, causal patterns of decision making and policy- making. S/U or letter grading.

240. Immigrant Children and Education. (4) Sem- inar, four hours. Examination of immigrant child and youth experience, with primary focus on educational outcomes. Topics include historical changes in expe- riences of immigrant youth, dynamics of immigrant families, cultural, ethnic, and socioeconomic status- related influences in immigrants’ adjustment, and school-family connections. Letter grading.


C244. Theory and Practice of Intergroup Dialogue: Ethnic, Cultural, and Political Issues. (4) Seminar, four hours. Topics include social psychology of intergroup rela- tions, intercultural and dialogic communication theo- ries, methods for reconciling and bridging differences areas of special interest to their professional and ca- reer objectives. S/U or letter grading.


246A. Decision Analysis and Advanced Computer Methods for Educational Policy and Planning. (4) Seminar, four hours. How information technology and decision analysis impact K-12 schooling, higher edu- cation, and technical training/workplace settings. With research paper, oral presentation, and two re- search briefs, students can pursue decision analysis areas of special interest to their professional and ca- reer objectives. S/U or letter grading.

247. Special Topics in Law and Educational Policy. (4) Lecture, four hours. Policy-oriented inquiry with focus on specific law-related debates that inevitably influence both K-12 and higher edu- cation/alternative analytical models. Letter grading.

248. Seminar: Special Topics in Child Development and Education. (4) Seminar, four hours. Content varies; limits of investigation set by individual in- structor. S/U or letter grading.

250A. Fundamentals of U.S. Higher Education Sys- tem. (4) Lecture, four hours. Designed for graduate students. Two-course sequence designed to orient new students to issues, ideas, and literature that con- stitute this division, with emphasis on underlying so- cial and political issues that shape higher education and organizational change. Letter grading.

250B. Organizational Analysis of Higher Educa- tion. (4) Lecture, four hours. Designed for graduate students. Two-course sequence designed to orient new students to issues, ideas, and literature that con- stitute this division, with emphasis on underlying so- cial and political issues that shape higher education and organizational change. Letter grading.

250C. Theoretical Frameworks of Higher Educa- tion. (4) Lecture, four hours. Designed for graduate students. Overview of various social sciences theories used to analyze institutions and issues of contempo- rary higher education. Explanation of how theory and methodology affect research framing and research questions in studies of higher education. Letter grading.

252A. Seminar: Educational Organizations. (4) Seminar, four hours. Requisite: course 208A. S/U or letter grading.
252B. Educational Enterprise. (4) Lecture, two hours; discussion, two hours. Requisite: course 252A. Limited to Educational Leadership Program students. Use of structural, human resource, political, and symbolic frames to study K–12 education, with focus on educational environments, organizations, and curriculum and instruction. Letter grading.

253A. Seminar: Current Problems in Comparative Education. (4) Same as Gender Studies M253A.) Seminar, four hours. Examination of some of most influential critical theorists, including Marx, Nietzsche, Freud, Marcuse, Foucault, Fanon, and de Beauvoir and their contributions to critique of contemporary education, society, and politics. S/U or letter grading.

253B. Seminar: African Education. (4) Seminar, four hours. Designed for graduate students. Contemporary issues in African educational systems, including questions of access and equity, quality and efficiency, relevance and responsiveness, links between schools and communities, and policy and practice in education. S/U or letter grading.


253D. Seminar: Latin American Education. (4) Seminar, four hours. S/U or letter grading.

253E. Seminar: European Education. (4) Seminar, four hours. S/U or letter grading.

253F. Seminar: Education in Revolutionary Societies. (4) Seminar, four hours. Multidisciplinary and comparative study of socialist educational theory examined through writings of Marx, Lenin, Mao, and others. Implementation of this theory in specific case studies, along with comparative assessments of non-socialist nations. S/U or letter grading.

253G. Seminar: Asian Americans and Education. (4) Seminar, four hours. Basic issues and topics related to Asian Americans in field of education. Examples of issues and topics include Asian Americans and community, socioeconomic status, education-to-work transition, language and culture question. S/U or letter grading.

253H. Seminar: Chicanos/Hispanics and Education. (4) Seminar, four hours. Basic issues and topics related to Chicanos and other Hispanic groups in education. Review of literature on specific educational levels and Chicano/Hispanic student progress (e.g., early childhood, elementary, higher education; specific topics: assessment, access, tracking, segregation; implications for schooling). S/U or letter grading.

253I. Education and Social Change in Middle East and Islamic World. (4) Seminar, four hours. Critical and analytic examination of historical and current role of traditional and modern (Western) education in affecting social, political, and economic changes in countries of Middle East and Islamic world (including Pacific Rim, South and Central Asia). S/U or letter grading.


255A-255B-255C. Seminars: Special Topics. (4-4-4) Seminar, four hours. May be repeated for credit. S/U or letter grading. 255A. Measurement. 255B. Design. 255C. Data Analysis.


256B. Seminar: Special Topics in Development. (4) Seminar, four hours. S/U or letter grading.

257. Seminar: Research in Counseling Psychology. (4) Seminar, four hours. In-depth analysis of selected research approaches/areas in counseling psychology. S/U or letter grading.

258A. Seminar: Problems in Instructional Research. (4) Seminar, four hours. S/U or letter grading.

258B. Seminar: Problems in Instructional Development. (4) Seminar, four hours. S/U or letter grading.

259. Administration of International Programs in Higher Education. (4) Seminar, four hours. Introduction to theory and practice of internationalization in U.S. higher education, looking at meaning of concept of comprehensive internationalization across campus, issues of effective leadership and management, and individual aspects of internationalization, including study abroad program development and implementation, international student recruitment and support services, international curricula—area and language studies, English as a second language programs, international internships and careers, faculty development in international travel and research, international partnerships/branch campuses, international developmental and grant projects, international alumni, distance learning/massive open online courses (MOOCs)/hybrid models. Letter grading.


261E. Higher Education Seminar: Diversity Issues and Research Perspectives. (4) Seminar, four hours. Examination of how racial diversity and its related dynamics have transformed and at same time been reshaped by institutions of higher education, with focus specifically on student experiences, curricula, institutional climate, educational policies, and administrative practices. Letter grading.

261F. Seminar: Cognitive and Personal Development of College Students. (4) Seminar, four hours. Examination of cognitive development of college students; issues of personal and social development, including leadership, and interpersonal relations and skills. S/U or letter grading.

262B. Seminar: Reading. (4) Seminar, four hours. S/U or letter grading.

262F. Seminar: Research Topics in Bilingual/Multicultural Education. (4) Seminar, four hours. S/U or letter grading.

263. Seminar: Higher Education. (4) Seminar, four hours. May be repeated for credit. S/U or letter grading.

264. Seminar: Teacher Education. (4) Seminar, four hours. Research, issues, and practices in preservice and in-service teacher preparation, evaluation, and certification. Social, philosophical, and methodological issues and current trends in America and abroad. Opportunities to observe, participate in, and discuss teacher education programs. S/U or letter grading.

265. Higher Education Policy. (4) Lecture, four hours. Requisites: courses 291A, 291B. Understanding public policy for higher education requires understanding of both issues and policy process. View of major topics on which U.S. government is active, as well as major actors and issues affecting the field. M266. Feminist Theory and Social Sciences Research. (4) Same as Gender Studies M266.) Lecture, four hours. Examination of how diverse feminist social sciences theories of last quarter century have both challenged and strengthened conventional social sciences theories and their methodologies. Introduction especially to feminist standpoint theory, distinctive critical theory methodology now widely used in social sciences. Letter grading.


268. Theorizing Reading: Rhetorics of Academic Discourse. (4) Lecture, two hours; discussion, two hours. Designed for graduate students. Introduction to theoretical approaches to reading, such as poststructuralist, feminist, deconstruction, reader reception, and semiotics, and to core ideas of some leading theorists of reading, such as Barthes, Iser, Bhaba, Spivak. Letter grading.

269. Representations of Education in Cinema. (4) Lecture, two hours; discussion, two hours. Designed for graduate students. View of how we draw on diverse “texts,” particularly films set in or around schools, to illuminate contemporary issues in American secondary education (e.g., issues pertaining to representation of teachers, students, parents, and administrators and curriculum in popular films about high school and adolescents). Letter grading.

270. Introduction to Cultural Studies. (4) Lecture, four hours. Investigation of current trends in cultural studies through examination of cultural interpretation, seminal texts in cultural studies, and practical criticism engaging popular artifacts of media culture. Emphasis on developing critical media literacy as goal of cultural studies. Letter grading.

271A. Proseminar: Educational Psychology. (2) Seminar, two hours. Introduction to variety of research issues in field of educational psychology, including topics related to development, learning and instruction, counseling, and special education, and to different methodological approaches used to study them. S/U grading.

272. Case-Studio Research in Education Policy and Practice. (4) Discussion, four hours. Use of case-study methods in education research, providing opportunities for applying methodological skills to actual case-study research projects. Focus on single and multiple case studies related to education policy and practice. Letter grading.

273A. Structure and Dynamics of Educational Systems. (4) Lecture, two hours; discussion, two hours. Overview of school administration, curriculum, and in-service teacher preparation, evaluation, and certification. Social, philosophical, and methodological issues and current trends in America and abroad. Opportunities to observe, participate in, and discuss teacher education programs. S/U or letter grading.

273B. Social Foundations of Education. (4) Seminar, four hours. Introduction to literature on multiculturalism and teachings in diverse social, cultural, and economic contexts. Exploration of debates over multiculturalism and teaching for democratic citizenship by review of diverse number of anthropological, sociological, educational curricula and literatures. Letter grading.

274. Science, Technology, and Social Research after Eurocentrism. (4) Lecture, four hours. Philosophy of natural sciences for social scientists that examines challenges to conventional research assumptions raised by multicultural and postcolonial science and technology studies that have emerged since World War II. Focus on sciences and technologies in third-world development projects, comparative ethnoscience movements, and new knowledge and how to do maximally objective research emerging from these literatures. Letter grading.

275. Race and Education. (4) Seminar, four hours. Designed for graduate students. Examination of role of race in educational policymaking. Exploration of broad interpretation of how schools contribute to racial stratification and inequality by linking sociological and sociopsychological theories of race, racial attitudes, and conflict to historical policy analysis. Letter grading.

276. Contemporary Theories of Writing. (4) Lecture, four hours. Review of current theories of writing and literacy research and examination of relationships among writing and literacy, culture, and human development. In particular, examination of history of writing research over last three decades as part of broader intellectual history. Letter grading.


CM278. Critical Media Literacy and Politics of Gender: Theory and Production. (4) Same as Gender Studies CM278.) Seminar, three hours. Co-requisite: course CM278L. Use of range of pedagogical approaches to theory and practice of critical media literacy that necessarily involves understanding of new technologies and media formats in production of both theory and production techniques to inform student analysis of media and critical media literacy projects. Concurrently scheduled with course CM178. Letter grading.
CM278L. Critical Media Literacy and Politics of Gender: Laboratory. (4) (Same as Gender Studies CM278L.) Laboratory, two hours. Corequisite: course CM278. Hands-on production experience as integral component of course CM278. Concurrently scheduled with course CM178L. Letter grading.

279. History of Urban Schooling. (4) Lecture, four hours. Designed for graduate students. Survey of major events, political and economic forces, and ideas that shaped urban schools since 1890. Examination of historical scholarship across range of political/ideological perspectives. Letter grading.

280A. Seminar: Selected Topics in Special Education. (2 to 6) Seminar, two to six hours. Focus on research and clinical problems in special education. Preparation of short papers and introduction to range of clinical services and research strategies. Exploration of current topics in field. S/U or letter grading.

280B. Seminar: Exceptional Individuals. (4) Seminar, four hours. Limited to doctoral students. S/U or letter grading.

281. College Access Seminar. (4) Seminar, two hours; discussion, two hours. Knowledge of changing dynamics of college access at individual, organizational, and policy levels; understanding of links between K-12 and postsecondary stratification and how educational advantage and disadvantage accumulates throughout education and affects equity in college access. Letter grading.


283. Social Research in Multicultural and Postcolonial Contexts. (4) Seminar, four hours. Philosophy of social sciences that focuses on how to think productively about two issues: (1) inevitability of nonneutral procedures and results of research conducted within liberal state that must be committed to value-neutrality and (2) challenges that multicultural and postcolonial social theory have raised to conventional research theories and methodologies. Letter grading.


288. Research Apprenticeship Course. (2) Seminar, four hours. Designed for graduate students. Experiences in research, offering structured opportunity to practice various practical aspects of research (instrumentation, design, data collection, analysis, and report writing). Letter grading.

289. Research Topics in Education: Organizational Theory. (2) Lecture, two hours. Examination of organizational theories, especially as they apply to school organizations. Letter grading.

290. Educational Policy Analysis: Research, Theory, and Practice. (4) Seminar, four hours. Broad overview of development of educational policy from 1950s to present. Examination of current issues and debates within educational policy in U.S. through different theoretical lenses. Exploration of major bodies of research on educational policy and alternative paradigms. Letter grading.

294A-M294B. High School Reform: Persisting Failure, Urgent Challenges. (1 to 8 each) (Same as Law M294A-M294B.) Seminar, four hours. Course M294A is offered in fall and spring semesters only; course M294B is offered in spring semester only. S/U or letter grading.

295. Freire. (4) Seminar, four hours. Required: course C125 or C207 or prior knowledge of Freire’s work. Analysis of intellectual production of Paulo Freire linked to social context in which it took place. Study of his life and work in five phases: Brazilian Experience (1921 to 1964); Chilean Experience, where he worked as an educator and writer; Family and friends (1969); his work at Harvard, and then World Council of Churches in Geneva (1970 to 1980), including his consulting with postcolonial revolutionary governments in Africa; his return to Brazil and his work as Secretary of Education in São Paulo (1989 to 1992); and his global travels from 1989 until his death in 1997. Focus on work left incomplete before his death (including eco-pedagogy and citizen’s schools), and by implication his analyses, critiques, and impact in work all over the world. Letter grading.

296A-296F. Seminars: Research Topics in Education. (2 to 6 each) Seminar. (2) Seminar, two hours. Theory and its application to study of educational settings and institutions. Examination of major paradigms, important schools of thought, and parameters of educational problems. Letter grading.

296G. Research Topics in Education: Legal Aspects of Educational Management. (2) Lecture, two hours. Examination and analysis of legal issues, especially as they apply to school organizations. Letter grading.

296H. Research Topics in Education: Organizational Theory. (2) Lecture, two hours. Examination and analysis of organizational theories, especially as they apply to school organizations. Letter grading.

296I. Theory in Educational Inquiry. (2) Seminar, two hours. Theory and its application to study of educational settings and institutions. Examination of major paradigms, important schools of thought, and parameters of educational problems. Letter grading.

296J. Introduction to Survey Research Methods. (2) Seminar, two hours. Instruction to conceptual, theoretical, and methodological issues involved in survey-based research in education, offering structured opportunity to practice various practical aspects of research (instrumentation, design, data collection, analysis, and report writing). Letter grading.

296K. Research Design. (2) Seminar, two hours. Effective educational leaders require ability to accurately diagnose educational problems before jumping to poorly designed solutions. Course must include systematic ways to collect and analyze data, as well as minimize potential threats to validity and analysis. Designed to equip students with tools needed to design research studies that address specific real-world educational problems. Basic understanding of research designs as strategies for investigating educational problems, such as types of questions that can be answered with qualitative and mixed methods studies, design components, planning for fieldwork and data collection, sampling, ethics, and credibility. Letter grading.

296L. Research Practicum: Education. (4) Clinical course, may be repeated for credit. Letter grading.

300. Dissertation Writing Workshop: Interdisciplinary Seminar. (4) Seminar, one hour; discussion, two hours; laboratory, one hour. Limited enrollment. Introduction to dissertation writing as genre that can be analyzed or broken down with its constituent parts and, vice versa, which is constructed out of materials that can be identified and analyzed. S/U grading.

301. Introduction to Information and Presentation Tools. (2) Laboratory, two hours. Limited to credential program students. Sequence of laboratory sessions providing preservice teachers with introduction to educational technology infrastructure and classroom presentation tools. Introduction to resources and services, e-mail and internet, and presentation software and multimedia elements. S/U grading.

305. Health Education for Teachers. (2) Lecture, two hours. Limited to Teacher Education Program students. Teaching/learning process as applied to promoting community, cultural, and personal health. Include psychoactive drugs (alcohol, tobacco, and narcotics), human sexuality, nutrition, community health resources, and analysis of state’s health framework. S/U grading.

309. Methodologies for English Language Learners. (2) Laboratory, two hours. Limited to credential program students. Pedagogy for bilingual and English language learners. Discussion of competencies and methods that can be selected by all content areas in English language, including strategies for teaching in and through English. Topics include educational issues, organizational approaches, and communicative approaches to instruction. Letter grading.

310. Professional Communication for Graduate Students in Education. (2) Lecture, two hours. Writing workshop on students’ papers in progress to ensure professional standards. Analysis and group discussion of rhetorical and stylistic principles. May be repeated once. S/U grading.

311. Principles and Methods of Computer Literacy and Classroom Application—K-12. (2) Lecture, one hour; laboratory, 30 minutes, one hour. Introduction to use of computers in educational environment. Discussion of issues on why and how to integrate computers into curriculum and hands-on practice that allows students to demonstrate knowledge and skills. Letter grading.


316. Principles and Methods for Teaching Reading for Multiple Subject Instruction. (3) Lecture, three hours. Reading instruction in elementary schools. Analysis of reading problems and programs; study of relationships between language/culture/cognition and reading. Examination and development of instructional programs; analysis and practice of alternative instructional methods. Observation and participation in schools. Letter grading.

316B. Elementary Methods. (3) Seminar, three hours. Theoretical principles and pedagogical strategies necessary for developing and maintaining balanced comprehensive literacy program for elementary school. Study of how children learn to read, write, and use language. Letter grading.


318A. Integrated Methods for Elementary Teachers. (3) Lecture, three hours. Examination and development of instructional programs and analyses and practices of instructional methods for teaching K-6 content, with emphasis on interdisciplinary approach that integrates content areas. Aligned with California state frameworks and California content standards for grades K-12 that address needs and interests of diverse students. Letter grading.

318B. Integrated Methods for Elementary Teachers. (4) Lecture, four hours. Examination and development of instructional programs and analyses and practices of instructional methods for teaching K-6 content, with emphasis on interdisciplinary approach that integrates content areas and infuses literacy, technology, and strategies for second language learners. Aligned with California state frameworks and California content standards for grades K-12, including English Language Development Standards—all of which address needs and interests of diverse students. Letter grading.

318C. Integrated Methods for Elementary Teachers. (4) Lecture, three hours. Examination and development of instructional programs and analyses and practices of instructional methods for teaching K-6 content, with emphasis on interdisciplinary approach that integrates content areas and infuses literacy, technology, and strategies for second language learners. Aligned with California state frameworks and California content standards. Letter grading.


320A-320B-320C. Secondary Content and Literacy Methods. (3-3-3) Lecture, three hours. Examination and development of instructional programs and analyses and practices of instructional methods for teaching K-6 content, with emphasis on interdisciplinary approach that integrates content areas and infuses literacy, technology, and strategies for second language learners. Methods courses are aligned with California state frameworks and California content standards for grades K-12, including English Language Development Standards—all of which address needs and various interests of diverse students. Letter grading.

321. Secondary Content and Literacy Methods in Ethnic Studies. (3) Lecture, three hours. Examination and development of instructional programs and analyses and practices of instructional methods for teaching ethnic studies in grades 7 through 12, with emphasis on interdisciplinary approach that integrates content areas and infuses literacy, technology, and strategies for second language learners. Methods courses align with California state frameworks and California content standards for grades K-12, including English Language Development Standards—all of which address needs and various interests of diverse students. Letter grading.


330A. Observation and Participation. (2 to 6) Site-based fieldwork, 10 to 15 hours. Students are assigned to school sites with racially, culturally, and linguistically diverse student populations. Throughout observation and participation period, students analyze effective strategies for achieving learning for all students, including sociocultural approaches and appropriate language development methods. Letter grading.

330B. Student Teaching. (4 to 8) Site-based fieldwork, 10 to 20 hours. Requisite: course 330A. Students are assigned to student teach in designated school sites with racially, culturally, and linguistically diverse student populations. Throughout student teaching period, students as novice teachers plan, implement, and assess daily lessons and units, as well as actively engage in reflecting on issues specific to school/community relations. S/U grading.

330C. Student Teaching. (4 to 8) Site-based fieldwork, 10 to 20 hours. Requisite: course 330A. Students are assigned to student teach in designated school sites with racially, culturally, and linguistically diverse student populations. Throughout student teaching period, students as novice teachers plan, implement, and assess daily lessons and units, as well as actively engage in reflecting on issues specific to school/community relations. Increased daily responsibilities. S/U grading.

330D. Classroom Residency and Teaching. (4) Site-based fieldwork, 40 hours. Students are employed by local schools as resident students in designated school sites with racially, culturally, and linguistically diverse student populations. Students also work collaboratively with students in their local school and/or complete case study on project. S/U grading.

360A-360B-360C. Novice Seminars. (2-2-2) Seminar, two hours. Analysis of basic principles and concepts of planning, conducting, and evaluating units of curriculum and instruction. Emphasis on study and utilization of constructivist strategies and their application in elementary and secondary schools. Examination of different methods of computer literacy and teaching subject matter. Students may conduct ethno- graphic inquiry of local community of their designated partnership district. May be repeated for credit. S/U grading.

375. Teaching Apprenticeship Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprenticeship personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

390A-390B-390C. Colloquium in Human Development. (1-1-1) Seminar, one hour. Required of first-, second-, and third-year Human Development and Psychology (HDP) PhD students. Training to conduct research that has practical implications as we engage with the complex field of applied human development. Children’s cognitive, language, personality, and social development in educationally relevant settings such as schools and daycare programs. Series unites scholars exploring contemporary issues in applied human development and provides framework to facilitate research and training in human development within school and UCLA community, as well as forum to share information with other institutions. May be repeated for credit. S/U grading.


401. Structure and Functions of Schools as Complex Organizations. (4) Lecture, four hours. Critical analysis of alternative assumptions about organizations, how they function, and why people in organizations behave as they do. Application to special circumstances of schools and to contemporary issues and problems in school leadership, improvement, and reform. S/U or letter grading.


403. Infant-Toddler Child Development and Care. (4) Lecture, four hours. Exploration of early childhood development (ages 0 to 3) and implications of development on their care and education. Introduction to major theories in child development, developmental milestones, and recent brain development research. Topics include family engagement, inclusion, risk contexts, developmentally appropriate practices, and assessment. S/U or letter grading.


405A-405B-405C. Teaching in Urban Schools. (2-2-2 Seminar, two hours. Limited to credential program students. Letter grading.

405A. Exploring Communities. (2) Seminar, two hours. Limited to credential program students. Examination and reflection on student values, beliefs, assumptions, and lives to determine how these factors shape way students view their world and, in particular, teaching, learning, students, their families, and their neighborhoods and communities. Letter grading.

405B. Exploring Identities. (2) Seminar, two hours. Limited to credential program students. Examination and reflection on student values, beliefs, assumptions, and lives to determine how these factors shape way students view their world and, in particular, teaching, learning, students, their families, and their neighborhoods and communities. Letter grading.

405C. Exploring Family-School Connections. (2) Seminar, two hours. Limited to credential program students. Examination of interrelationships among families, communities, and schools and students in understanding self, caregivers, guardians, students, and school personnel to develop strategies for working with families and to develop philosophy of education. Letter grading.


426A-426B. Program Development and Program Evaluation in Student Affairs. (2-2) Lecture, two hours. Introduction to program development and planning, as well as to assessment and program review. Development of knowledge of and skill in planning educational and training programs that provide support for student development within context of student affairs, as well as knowledge of and skill in developing, implementing, and analyzing assessment projects within student affairs context. Study of basic theoretical perspectives informing program design/implementation and program review/assessment and application by developing, implementing, and assessing effectiveness of one program. In Progress (426A) and letter (426B) grading.

431A. Administration in Higher Education. (4) Lecture, four hours. Overview of college and university administration and introduction to policy research and analysis in postsecondary institutions. Case studies of administrative problems, policies, and practices. Management information systems, resource allocation, and issues related to responsibility, authority, and participation in administrative decisions. S/U or letter grading.


432. Seminar: Professional Topics in Higher Education. (4) Seminar, four hours. S/U or letter grading.


433B. Development of Educational Media. (4) Discussion, four hours. Current issues and trends in design of interactive educational media. Design and development of educational media applications, integration plans for established or experimental educational media into formal learning settings, or evaluations of specific learning environments. Letter grading.

440C. Administration of Instructional Programs. (4) Lecture, four hours. Examination of current educational problems in society and strategies of their solution through curriculum policy and practice; instructional design and operation; in-service training of teaching staffs. S/U or letter grading.

441A. Instructional Supervision A. (4) Lecture, four hours. Analysis of teaching in light of research-substantiated elements of instruction: task analysis, appropriate objectives, principles that increase motivation, rate and degree of learning, retention and transfer, monitoring and adjusting instruction to meet needs and capacities of learners. S/U or letter grading.


442B. Legal Aspects of Educational Management and Practice. (4) Lecture, four hours. Examination of structures and kinds of law governing educational systems in U.S.; constitutionaldimensions of church/state relations; civil rights and legal aspects of hiring, firing, and negotiating procedures; student attendance, control, and civil rights. S/U or letter grading.

443. Policy Analysis in Education. (4) Lecture, four hours. Overview of political, economic, and legal context of educational policy formation. Included in examination are issues that impact on minorities (e.g., bilingual education, desegregation, affirmative action, role of subcommittees in policy-making process). S/U or letter grading.

444B. Equality of Educational Opportunity through Desegregation and Finance Case Law. (4) Lecture, four hours. Emphasis on development of an understanding of the view of definition of equality of educational opportunity as it is being developed by courts in cases concerning desegregation and educational finance. S/U or letter grading.

447. Seminar: Educational Policy and Planning, Special Studies. (1 to 4) Seminar, one to four hours. S/U or letter grading.

448A. Urban School Leadership. (4) Lecture, four hours. Analysis of problems of urban school leadership. Emphasis on changing nature of urban principalship, with considerable attention to role of other school and community agencies that interact with urban school leaders. S/U or letter grading.

448B. Urban School Leadership Laboratory. (4) Lecture, four hours. Analysis of and opportunity to practice human and technical skills required for success as urban school leader. Topics include negotiations, conflict resolution, applications of technology and effective communication. Activities include gaming, simulation, computer programming, and group dynamics. S/U or letter grading.

450. Leadership Capacity Building. (4) Lecture, one hour; discussion, three hours. Limited to Educational Leadership Program students. Course taken in year three of Educational Leadership Program to help students with their communication and leadership capacities. S/U grading.

451. Foundations of Organizations and Leadership. (4) Lecture, four hours. Limited to Educational Leadership Program students. Promotion of understanding of traditional and contemporary conceptions of leadership and organizational theory, with application of these conceptions to student professional work settings. Letter grading.

452A-452B. Educational Enterprise. (4-4) Lecture, two hours; discussion, two hours. Limited to Educational Leadership Program students. Use of structural, human resource, political, and symbolic frames to study K-16 education. Letter grading. 452A. Focus on personal and professional development of educational leaders, finance, process, and equity. 452B. Requisite: course 452A. Focus on educational environments, organizations, and curriculum and instruction.

453. Technology in Education: Learning and Leading with Technology. (4) Lecture, two hours; discussion, two hours. Limited to Educational Leadership Program students. Examination of roles of technology in educational institutions and leadership issues associated with these roles. Letter grading.

454A. Action Research: Collaboration in Change. (4) Lecture, one hour; discussion, two hours; small group work, one hour. Limited to Educational Leadership Program students. Students carry out full cycle of action research at educational site. Projects done in teams as students hone and assess their collaboration abilities. Exploration of qualitative and quantitative data gathering methods and analyses. Letter grading.

454B. Action Research: Collaboration in Change. (4) Lecture, one hour; discussion, two hours; small group work, one hour. Limited to Educational Leadership Program students. Students carry out full cycle of action research at educational site. Students conduct and analyzing growth-evoking teacher conferences. Conducting mini-lessons to demonstrate elements of good instruction. Letter grading.

455. Writing and Inquiry. (4) Lecture/workshop, eight hours per month; discussion, one hour; laboratory, one hour. Limited to doctoral students in Educational Leadership Program. Intended to assist students’ professional development as writers, addressing style and organization, scholarly genres, modes of discourse, and broader issues of conceptualization and method. Letter grading.

456. Altering Structure and Culture of Schooling. (4) Lecture, four hours; discussion, four hours. Limited to Educational Leadership Program students. Using applied orientation, examination of variety of approaches to organizational change and ways to sustain change. Letter grading.

457. Student Development across K-16 Spectrum. (4) Lecture, four hours. Limited to Educational Leadership Program students. Theories of student development applicable to K-12 and postsecondary education. Focus on educational influences on self and others. Letter grading.


460. Seminar: Special Issues in Evaluation. (2 or 4) Seminar, one or two hours; discussion, one or two hours. Topics and instructors vary each term. Recent emphases included evaluation utilization and cost-effectiveness evaluation. S/U or letter grading.

462. Seminar: Community College. (4) Seminar, four hours. Topics include problems and practices in community college for student flow, administration, and/or evaluation. S/U or letter grading.

466. Critical Media Literacy: Teaching Youth to Critically Read and Create Media. (4) Lecture, four hours. Preparation for educators to teach K-12 students to explore their relationships with media by critically questioning media representations and creating their own alternative media messages. Critical media literacy combines theoretical foundations of cultural studies and critical pedagogy with practical classroom applications of new digital media as well as traditional print-based means of communication. Exploration of media representations of race, class, gender, sexual orientation, and other identity markers. Educators critically question media and technology, as well as explore new alternatives for creating multimedia messages in their own classrooms. Analysis and creation of media projects related to teaching required. Letter grading.

470A. Seminar: Large Systems and Individual Schools. (4) Seminar, four hours. S/U or letter grading.


482A. Instructional Strategies in Urban Education: Technology. (4) Lecture, four hours. Emphasis on instructional practices that integrate use of technology in urban public schools. Study and analysis of comprehension, specialization, use of appropriate computer-based technology to facilitate teaching, learning process, and debriefing of field experiences integrating technology-related tools. Letter grading.

482B. Instructional Strategies in Urban Education: English Language Learners. (4) Lecture, four hours. Emphasis on instructional practices that support English language learners in urban public schools. Study and analysis of delivery of comprehensive specialized instruction for English learners and debriefing of field experiences implementing adopted instructional programs for development of academic language, comprehension, and knowledge in core academic curricula. Letter grading.

482C. Instructional Strategies in Urban Education: Special Populations. (4) Lecture, four hours. Emphasis on instructional practices that support special populations in urban public schools. Continuation of study of statutory provisions, curriculum, instruction, and assessment issues related to teaching students.
with disabilities, students who are at risk, and students who are gifted and talented. Research opportunities, additional methods in content areas for advanced study, and preparation of M.Ed. inquiry included. Letter grading.

482D. Instructional Strategies in Urban Education: Visual and Performing Arts. (4) Lecture, two hours; discussion, two hours. Emphasis on instructional practices that integrate visual and performing arts into urban classrooms. Debriefing of field experiences implemented subject-centered arts instruction, instruction connecting arts disciplines, and instruction connecting arts and other core disciplines. Advanced exploration of elements of each art form, as well as content and emotional scaffolding strategies and reflection strategies to make learning accessible, engaging, and relevant. Letter grading.

485. Advanced Study of Health Education. (1) Lecture, four hours. Student meetings with instructors, field specialists, and team cohorts to study and analyze delivery of comprehensive support for physical, cognitive, emotional, and social well-being of students in K-12 classrooms. Topics include prevention and intervention strategies, accessing local and community resources, curriculum and instruction, and major state and federal laws related to student health and safety. Letter grading.

489. Instructional Strategies in Education. (4) Lecture, four hours. Methods for academic instruction, including research and active participation in adversary approach, forms of debate, role playing, interaction process analysis, and feedback instruments. Practical emphasis on social sciences and humanities instruction, K-12. S/U or letter grading.

490A. Instructional Decision Making. (4) Lecture, four hours. Analysis of instructional models relevant to public school education. Assumptions, procedures, and constraints of each strategy considered in terms of learner and task variables. Laboratory experiences in classroom settings permit students systematically to apply and evaluate alternative instructional strategies. S/U or letter grading.


495A-495B-495C. Resident Seminars. (4-4-4) Seminar; two hours; site-based fieldwork, two hours. Students meet in individual sessions with instructors and other field support faculty and in team and cluster cohorts for university-school partnership, in addition to regular seminars to debrief field experiences and continue study of curriculum, instruction, and assessment issues. Research opportunities, additional methods in content areas, and preparation of M.Ed. portfolio included. Letter grading.

496. Directed Independent Study. (1 to 12) Tutorial, to be arranged. Individual study or research for graduate students. May be repeated for credit. S/U or letter grading.

497. Preparation for Master’s Comprehensive Examinations or Doctoral Qualifying Examinations. (1 to 12) Tutorial, to be arranged. Individual study for master’s comprehensive examinations or for Ph.D. or Ed.D. qualifying examinations. May be repeated for credit. S/U grading.


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**ELECTRICAL ENGINEERING**

Henry Samuei School of Engineering and Applied Science

56-125B Engineering IV

Box 951594

Los Angeles, CA 90095-1594

310-825-2647

eccehar@ee.ucla.edu

http://www.ee.ucla.edu

Gregory J. Pottie, PhD, Chair

Abeer A.H. Alwan, PhD, Vice Chair, Undergraduate Affairs

Mona Jarrahi, PhD, Vice Chair, Graduate Affairs

C.-K. Ken Yang, PhD, Vice Chair, Industry Relations

**Professors**

Asad A. Abidi, PhD

Katsushi Arisaka, PhD

M.-C. Frank Chang, PhD (Wintek Endowed Professor of Electrical Engineering)

Panagiotis D. Christofides, PhD

Jingsheng Jason Cong, PhD

Babak Daneshrad, PhD

Suhas N. Diggavi, PhD

Christina P. Fragouli, PhD

Warren S. Grundfest, MD, FACS

Lei He, PhD

Diana L. Hulfaker, PhD

Tatsuo Itoh, PhD (Northrop Grumman Professor of Electrical Engineering)

Subramanian S. Iyer, PhD (Charles P. Reamns Endowed Professor Emeritus of Electrical Engineering)

Bahram Jalai, PhD (Northrop Grumman Opto-Electronic Professor of Electrical Engineering)

Chandrasekhar K. Joshi, PhD

William J. Kaiser, PhD

Douglas G. Lichtman, JD

Kuo-Nan Liou, PhD

Jia-Ming Liu, PhD

Wentai Liu, PhD

Dejan Markovic, PhD

Warren B. Mori, PhD

Ali Mosleh, PhD

Stanley J. Osher, PhD

Aydogan Ozcan, PhD

Gregory J. Pottie, PhD

Yahya Rahmat-Samii, PhD (Northrop Grumman Professor of Electrical Engineering/ Electromagnetics)

Behzad Razavi, PhD

Wvani P. Roychowdhury, PhD

Izhak Rubin, PhD

Henry Samuel, PhD

Majid Sarrafzadeh, PhD

All H. Sayed, PhD

Stefano Soatto, PhD

Jason L. Speyer, PhD

Mani B. Srivastava, PhD

Oscar M. Stafsudd, Jr., PhD

Dwight C. Streit, PhD

Paulo Tabuada, PhD

Lieven Vandenberghe, PhD

Mihaiela van der Schaar, PhD

John D. Villasenor, PhD

Kang L. Wang, PhD (Raytheon Company Professor of Electrical Engineering)

Richard D. Wesel, PhD

Chee Wei Wong, PhD

Jason C.S. Woo, PhD

C.-K. Ken Yang, PhD

Lixia Zhang, PhD

**Professors Emeriti**

Frederick G. Allen, PhD

Francis F. Chen, PhD

Harold R. Fettermann, PhD

Stephen E. Jacobsen, PhD

Rajeer Jain, PhD

Alan J. Laub, PhD

Nhan N. Levan, PhD

Dee-Son Pan, PhD

Frederick W. Scholtz, PhD

Gabor C. Temes, PhD

Chand R. Viswanathan, PhD

Donald M. Wilberg, PhD

Alan N. Williams, Jr., PhD (Charles P. Reames Endowed Professor Emeritus of Electrical Engineering)

Kung Yao, PhD

**Associate Professors**

Danijela Cabric, PhD

Robert N. Candler, PhD

Chi On Chui, PhD

Lara Dolecek, PhD

Puneet Gupta, PhD

Mona Jarrahi, PhD

Sudhakar Pamarthi, PhD

Yuanxun Ethan Wang, PhD

Benjamin S. Williams, PhD

**Assistant Professors**

Sam Emamnejad, PhD

Alyson K. Fletcher, PhD

Jonathan C. Kao, PhD

Akiru M. Mehta, PhD

**Adjunct Professors**

Ezio Biglieri, PhD

Darush Divisalar, PhD

Dan M. Goebel, PhD

Asad M. Madni, PhD

Y-Chi Shih, PhD

Ingrid M. Verbauwhede, PhD

Eli Yablonovitch, PhD

**Adjunct Associate Professor**

Keisuke Goda, PhD

**Adjunct Assistant Professors**

Pedram Khallili Amiri, PhD

Shervin Moloudi, PhD

Zachary D. Taylor, PhD

**Scope and Objectives**

Electrical engineers are responsible for inventions that have revolutionized our society, such as the electrical grid, telecommunications, and automated computing and control. The profession continues to make vital contributions in many domains, such as the infusion of information technology into all aspects of daily life. To further these ends, the Department of Electrical Engineering fosters a dynamic academic environment that is committed to a tradition of excellence in teaching, research, and service and has state-of-the-art research programs and facilities in a variety of fields. Departmental faculty members are engaged in research ef-
forts across several disciplines in order to serve the needs of industry, government, society, and the scientific community. Interactions with other disciplines are strong. Faculty members regularly conduct collaborative research projects with colleagues in the Geffen School of Medicine, Graduate School of Education and Information Studies, School of Theater, Film, and Television, and College of Letters and Science.

There are three primary research areas in the department: circuits and embedded systems, physical and wave electronics, and signals and systems. These areas cover a broad spectrum of specializations in, for example, communications and telecommunications, control systems, electromagnetics, embedded computing systems, engineering optimization, integrated circuits and systems, microelectromechanical systems (MEMS), nanotechnology, photonics and optoelectronics, plasma electronics, signal processing, and solid-state electronics.

The program grants one undergraduate degree (Bachelor of Science in Electrical Engineering) and two graduate degrees (Master of Science and Doctor of Philosophy in Electrical Engineering). The graduate program provides students with an opportunity to pursue advanced coursework, in-depth training, and research investigations in several fields.

### Undergraduate Study

The electrical engineering program is accredited by the Engineering Accreditation Commission of ABET. The Electrical Engineering major is a designated capstone major. Undergraduate students complete a design course in which they integrate their knowledge of the discipline and engage in creative design within realistic and professional constraints. Students apply their knowledge and expertise gained in previous mathematics, science, and engineering coursework. Within a multidisciplinary team structure, students identify, formulate, and solve engineering problems and present their projects to the class.

### Electrical Engineering BS

#### Capstone Major

The undergraduate curriculum provides all Electrical Engineering majors with preparation in the mathematical and scientific disciplines that lead to a set of courses that span the fundamentals of the three major departmental areas of signals and systems, circuits and embedded systems, and physical wave electronics. These collectively provide an understanding of inventions of importance to society, such as integrated circuits, embedded systems, photonic devices, automatic computation and control, and telecommunication devices and systems.

Students are encouraged to make use of their electrical engineering electives and a two-term capstone design course to pursue deeper knowledge within one of these areas according to their interests, whether for graduate study or preparation for employment. See the department website for examples of specializations.

#### Preparation for the Major

Required: Chemistry and Biochemistry 20A; Computer Science 31, 32; Electrical Engineering 2, 3, 10, 11L, M16 (or Computer Science M51A); Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4AL, 4BL.

### The Major

Required: Electrical Engineering 101A, 102, 110, 111L, 113, 131A; six core courses selected from Computer Science 33, Electrical Engineering 101B, 115A, 121B, 132A, 133A, 141, 170A; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; 12 units of major field elective courses, at least 8 of which must be upper-division electrical engineering courses — the remaining 4 units may be from upper-division electrical engineering courses or from another HSSEAS department; and one two-term electrical engineering capstone design course (8 units).

For information on University and general education requirements, see the College and Schools chapter earlier in this catalog.

### Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

#### Graduate Degrees

The Department of Electrical Engineering offers Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Electrical Engineering.

### Electrical Engineering Lower-Division Courses

1. **Undergraduate Seminar.** (1) Seminar, one hour; outside study, two hours. Introduction by faculty members and industry lecturers to electrical engineering disciplines through current and emerging applications of autonomous systems and vehicles, bio-medical devices, aerospace electronic systems, consumer products, data science, and entertainment products (amusement rides, etc.), as well as energy generation, storage, and transmission. P/NP grading.

2. **Physics for Electrical Engineers.** (4) Lecture, four hours; discussion, two hours; outside study, six hours. Required: Physics 1C. Introduction to concepts of modern physics necessary to understand solid-state devices, including elementary quantum theory, Fermi energies, and concepts of electrons in solids; Discussion of electrical properties of semiconductors leading to operation of junction devices. Letter grading.

3. **Physics for Electrical Engineers (Honors).** (4) Lecture, four hours; discussion, two hours; outside study, six hours. Required: Physics 1C. Honors course parallel to course 2. Letter grading.

4. **Introduction to Electrical Engineering.** (4) Lecture, two hours; laboratory, two hours; outside study, eight hours. Introduction to field of electrical engineering. Basic circuit techniques with application to explanation of electrical engineering inventions such as telecommunications, electrical grid, automatic computing and control, and enabling device technology. Research frontiers of electrical engineering. Introduction to measurement and design of electrical circuits. Letter grading.

5. **Circuit Theory I (Honors).** (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Required: course 3 (or Computer Science 1 or Materials Science 10), Mathematics 33A, Physics 1B. Corequisites: course 11L (enforced only for Computer Science and Engineering and Electrical Engineering majors), Mathematics 33B. Introduction to linear circuit analysis. Resistive circuits, capacitors, inductors and ideal transformers, Kirchhoff laws, node and loop analysis, first-order circuits, transient circuits; Thévenin and Norton theorems; sinusoidal steady state. Letter grading.

6. **Circuit Theory II (Honors).** (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Required: course 3 (or Computer Science 1 or Material Sciences 10), Mathematics 33A, Physics 1B. Corequisites: course 11L (enforced only for Computer Science and Engineering and Electrical Engineering majors), Mathematics 33B. Honors course parallel to course 10. Letter grading.

7. **Circuits Laboratory I.** (1) Lecture, one hour; laboratory, one hour; outside study, one hour. Enforced corequisite: course 10. Experiments with basic circuits containing resistors, capacitors, inductors, and transformers. Ohm’s law voltage and current division, Thévenin and Norton equivalent circuits, superposition, transient and steady state analysis. Letter grading.

8. **Circuits Laboratory II.** (1) Lecture, one hour; laboratory, one hour; outside study, six hours. Introduction to digital systems. Specification and implementation of combinational and sequential systems. Standard logic modules and programmable logic arrays. Specification and implementation of algorithmic systems: data and control sections. Number system and arithmetic algorithms. Error control codes for digital information. Letter grading.

### Upper-Division Courses

100. **Electrical and Electronic Circuits.** (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Required: Mathematics 33A, 33B or Mechanical and Aerospace Engineering 82, Physics 1C. Not open for credit to students with credit for course 110. Electrical quantities, linear circuit elements, circuit principles, signal waveforms, transient and steady state circuit behavior, semiconductor diodes and transistors, small signal models, and operational amplifiers. Letter grading.

101A. **Engineering Electromagnetics.** (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Required: Mathematics 32A and 32B, or 33A and 33B, Physics 1C. Electromagnetic field concepts, waves and phasors, transmission lines and Smith chart, transient responses, vector analysis, introduction to Maxwell equations, static and quasi-static electric and magnetic fields. Letter grading.

101B. **Electromagnetic Waves.** (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: course 101A. Time-varying fields and Maxwell equations, plane wave propagation and interaction with media, energy flow and Poynting vector, guided waves in waveguides, phase and group velocity, radiation and antennas. Letter grading.

110. Circuit Theory II. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Enforced requisites: courses 10, M16 (or Computer Science M51A, 102). Corequisite: course 111L (enforced only for Computer Science and Engineering and Electrical Engineering majors). Sinusoidal excitation and phasors, AC steady state analysis, AC steady state power, network functions, poles and zeros, frequency response, mutual inductance, ideal transformer, application of Laplace transforms to circuit analysis. Letter grading.

110L. Circuit Measurements Laboratory. (2) Laboratory, four hours; outside study, two hours. Requisite: course 110. Experiments with basic circuits containing resistors, capacitors, inductors, and op-amps. Ohm’s law, voltage, and current division. Transient and steady state analysis, and frequency response principles. Letter grading.

111L. Circuits Laboratory II. (1) Lecture, one hour; laboratory, one hour; outside study, one hour. Enforced requisites: courses 10, 11L. Enforced corequisite: course 110. Experiments with electrical circuits containing resistors, capacitors, inductors, trans- formers, and op-amps. Steady state power analysis, frequency response principles, op-amp-based circuit synthesis, and two-port network principles. Letter grading.

112. Introduction to Power Systems. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: course 110. Complete overview of various electrical power systems and operation of interconnected power systems. Development of appropriate models for interconnected power systems and learning how to perform power flow, economic dispatch, and short circuit analysis. Introduction to power system transient dynamics. Letter grading.


113DA-113DB. Digital Signal Processing Design. (4-4) Real-time implementation of digital signal processing algorithms on digital processor chips. Experiments involving A/D and D/A conversion, aliasing, digital filter design, and implementation and operation of interconnected power systems. Requisites: course 113D. Lecture, two hours; laboratory, four hours; outside study, six hours. Enforced requisite: course 113C. In progress grading (credit to be given only in course 113DB). Labo-ratory, four hours; outside study, eight hours. Enforced requisites: courses 113, 113DA. Completion of projects begun in course 113DA. Letter grading.

114. Speech and Image Processing Systems Design. (4) Lecture, three hours; discussion, one hour; laboratory, two hours; outside study, six hours. Enforced requisite: course 113. Design principles of speech and image processing systems. Speech production and recognition, image coding in first half of course and design techniques for image enhancement, filtering, and transformation in second half. Lectures supplemented by laboratory implementation of speech and image processing tasks. Letter grading.


115AL. Analog Electronics Laboratory I. (2) Laboratory, four hours; outside study, two hours. Enforced requisites: courses 110L or 111L, 115A. Experimental determination of device characteristics, resistive diode circuits, single-stage amplifiers, compound transistor stages, effect of feedback on single-stage amplifiers, operational amplifiers, and operational amplifier circuits. Introduction to hands-on design experience based on individual student hardware design and implementation platforms. Letter grading.


115C. Digital Electronic Circuits. (4) Lecture, four hours; discussion, seven hours; outside study, six hours. Enforced requisites: course 115A, Computer Science M51A. Recommended: course 115B. Transistor-level digital circuit analysis and design. Modern logic families (static CMOS, pass-transistor, dynamic logic), integrated circuit (IC) layout, digital circuits (logic gates, flip-flops, latches, counters, etc.), computer-aided simulation of digital circuits. Letter grading.

115E. Design Studies in Electronic Circuits. (4) (Formerly numbered 115D) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: course 115B. Description of process of circuit design. Design projects to complement other laboratory-based design courses. Topics vary by instructor and include communication circuits, power electronics, and instrumentation and measurement equipment. Emphasis throughout on design-oriented analysis and rigorous approach to practical circuit design. Letter grading.

116C. Computer Systems Architecture. (4) Same as Computer Science M151B) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisite: course M16 or Computer Science M51A, Computer Science 33. Recommended: Computer Science M152A, Computer Science 111. Computer system organization and design, implementation of CPU datapath and control, instruction set design, memory hierarchy (caches, main memory, virtual memory) organization and management, input/output subsystems (bus structures, interrupts, DMA), performance evaluation, pipelined processors. Letter grading.

116L1. Introductory Digital Design Laboratory. (2) (Same as Computer Science M152A) Laboratory, four hours; outside study, two hours. Enforced requisite: course M16 or Computer Science M51A. Hands-on design of digital circuits using digital design tools. From these nanoscale components, discussion of basic behaviors of nanosystems such as analysis of dynamics, variability, and noise, contrasted with those of scaled CMOS. Incorporates nanoscale design process integration tool based on SUPREM, photolithography. Introduction to CAD tools used in design of nano-structures for digital filtering. Introduction to digital filter design techniques. Letter grading.

117. Computer Networks: Physical Layer. (4) (Same as Computer Science M117) Lecture, two hours; discussion, two hours; laboratory, two hours; outside study, six hours. Not open to students with credit for course M171L. Introduction to fundamental computer communication concepts underlying and supporting modern networks, with focus on wireless communications and media access layers of network protocols. Hands-on experience with wireless LANs (IEEE802.11) and ad hoc wireless and personal area networks (e.g., Bluetooth, ZigBee). Experimental project based on mobile radio-equipped devices (smart phones, tablets, etc.) as sensor platforms for wireless sensor networks to design and implement a C program for sending and receiving data. Letter grading.

117L. Computer Networks: Physical Layer. (2) (Same as Computer Science M117) Lecture, two hours; discussion, two hours; laboratory, two hours; outside study, six hours. Not open to students with credit for course M191L. Introduction to fundamental computer communication concepts underlying and supporting modern networks, with focus on wireless communications and media access layers of network protocols. Hands-on experience with wireless LANs (IEEE802.11) and ad hoc wireless and personal area networks (e.g., Bluetooth, ZigBee). Experimental project based on mobile radio-equipped devices (smart phones, tablets, etc.) as sensor platforms for wireless sensor networks to design and implement a C program for sending and receiving data. Letter grading.

118. Principles of Nanoelectronics. (4) Lecture, four hours; discussion, four hours; outside study, eight hours. Requisite: Physics 1C. Introduction to fundamentals of nanoelectronics. Principles of fundamental quantities: electron charge, effective mass, Bohr magneton, and spin, as well as their relationship to appropriate units of electrons, h-bar, and effective masses. Letter grading.

119A. Probability and Statistics. (4) Lecture, four hours; discussion, one hour; outside study, 10 hours. Requisites: courses 102 (enforced), Mathematics 32B, 33B. Introduction to basic concepts of probability, including random variables and vectors, distributions and densities, moments, characteristic functions, and limit theorems. Applications to communication, control, and signal processing. Introduction to computer simulation and generation of random events. Letter grading.

121B. Principles of Semiconductor Device Design. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Enforced requisite: course 2. Introduction to principles of operation of bipolar and MOS transistors, equivalent circuits, high-frequency behavior, voltage limitations. Letter grading.

121DA-121DB. Semiconductor Processing and Device Design. (4) Explores fabrication and characterization of p-n junction and transistors. Students perform various processing tasks such as wafer preparation, oxidation, diffusion, metallization, and photolithography. Brevity and scope are such that emphasis is on integrated circuit processing and device design. Device-structure optimization tool based on MEDIC; process integration tool based on SUPREM. Course familiarizes students with those tools. Using CAD tools, CMOS process integration to be designed. Letter grading.

121DB. (Formerly numbered 121L) Lecture, four hours; laboratory, four hours; outside study, four hours. Enforced requisite or corequisite: course 121B. In progress grading (credit to be given only on completion of course 121DB). Letter grading.

123A. Fundamentals of Solid-State I. (4) (Formerly numbered 123A) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisite: course 2 or Physics 1C. Limited to students who have not taken other laboratory or only on completion of course 121DB. Enforced requisite: course 123A. Discussion of solid-state properties, lattice vibrations, thermal properties, dielectric, magnetic, and superconducting properties. Letter grading.

123B. Fundamentals of Solid-State II. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 123A. Discussion of solid-state properties, lattice vibrations, thermal properties, dielectric, magnetic, and superconducting properties. Letter grading.

123. Fundamentals of Nanoelectronics. (4) Lecture, four hours; discussion, four hours; outside study, four hours. Requisite: Physics 1C. Introduction to fundamentals of nanoelectronics. Principles of fundamental quantities: electron charge, effective mass, Bohr magneton, and spin, as well as their relationship to appropriate units of electrons, h-bar, and effective masses. Letter grading.
symbol interference channels and orthogonal fre-
dquency division multiplexing (OFDM), basics of wire-
less communications. Letter grading.

132B. Data Communications and Telecommu-
nication Networks. (4) Lecture, four hours; discussion,
one hour; outside study, seven hours. Enforced requi-
site: course 131A. Layered communications architec-
tures. Queueing system modeling and analysis. Error
control, flow and congestion control. Packet switch-
ing. Switching. Network performance analysis and design. Multiple-access com-
munications: TDMA, FDMA, polling, random access.
Local, metropolitan, wide, integrated services networks.

133A. Applied Numerical Computing. (4) Formerly
numbered 103.) Lecture, four hours; discussion, one
hour; outside study, seven hours. Enforced requisites:
course 131A, and Civil Engineering M20 or Computer
Science 31 or Mechanical and Aerospace Engi-
neering M20. Introduction to numerical computing/
analysis; analytic formulations versus numerical solu-
tions; floating-point representations and rounding er-
rors. Review of linear algebra and linear algebra;
Linear equations; LU factorization; bounds on error;
iterative methods for solving linear equations; condi-
tioning and stability; complexity. Interpolation and ap-
proximation; splines; interpolation and roots of nonlinear
equations. Linear least squares and orthogonal (QR)
factorization; statistical interpretation. Numerical opti-
mization; Newton method; nonlinear least squares.
Numerical integration; discussion of ordinary differen-
tial equations. Eigenvalues and singular values; QR algo-
rithm; statistical applications. Letter grading.

133B. Simulation, Optimization, and Data Analysis.
(4) (Formerly numbered 136.) Lecture, four hours; dis-
cussion, one hour; outside study, seven hours. En-
forced requisite: course 133A. Simulation of dynam-
ical systems. Algorithms for ordinary differential and
difference equations. Random number generation.
Simulation of stochastic systems, Monte Carlo methods.
Constrained optimization; applications of optimization
to engineering design, modeling, and data analysis. In-
roduction to data mining and machine learning. Algo-
rithms and complexity. Integration of mathematical
software in applications. Letter grading.

134. Graph Theory in Engineering. (4) Lecture,
four hours; discussion, one hour; outside study, seven
hours. Basics of graph theory, including trees, bipar-
tite graphs and matching, vertex and edge coloring,
planar graphs and networks. Emphasis on reducing real-
world engineering problems to graph theory for-
mulations. Letter grading.

141. Principles of Feedback Control. (4) Lecture,
four hours; discussion, one hour; outside study, seven
hours. Enforced requisite: course 102. Mathematical
modeling of physical control systems in form of differ-
etial equations and transfer functions. Design prob-
lems, performance indices of feedback control sys-
tems via classical techniques, root-locus and
frequency-domain methods. Computer-aided solution
tecniques and control systems via classical techniques,

M153. Introduction to Microscale and Nanoscale
Manufacturing. (4) (Same as Bioengineering M153,
Chemical Engineering M153, and Mechanical and
Aerospace Engineering M183B.) Lecture, three hours;
laboratory, four hours; outside study, five hours. En-
forced requisites: courses 15A, 15B, 18A, 18L, 44L.
Introduction to general manufacturing methods, mechanisms,
constraints, and microfabrication and nanofabrication. Focus on concepts,
physics, chemistry, design, and microfabrication and nanofabrication
techniques that have been broadly applied in industry and academia,
including various photolithography technologies, physical and chemical
deposition, lithography, and chemical etching methods. Hands-on experience
for fabricating microstructures and nanostructures in modern cleanroom environment. Letter grading.

162A. Wireless Communication Links and Anten-
as. (4) Lecture, four hours; discussion, two hours;
outside study, six hours. Enforced requisite: course
101B. Basic properties of transmitting and receiving
antennas and antenna arrays. Antenna synthesis. Adap-
tive arrays. Friis transmission formula, radar equa-
tions. Cell-site and mobile antennas, bandwidth
budget. Noise in communication systems (transmis-
sion lines, antennas, amplifiers). Cel site and mobile
antennas, cell coverage for signal and traffic
interference, multipath fading, ray bending, and other
propagation phenomena. Letter grading.

163A. Introductory Microwave Circuits. (4) Lecture,
four hours; discussion, three hours; outside study, seven
hours. Enforced requisite: course 101B. Transmission
lines description of waveguides, impedance matching
techniques, power dividers, directional couplers,
active devices, transistor amplifier design. Letter grading.

163C. Introduction to Microwave Systems. (4) Lec-
ture, four hours; outside study, eight hours. Enforced
requisite: course 101B. Theory and design of modern
microwave systems and communication systems, radar systems, wireless
to logical applications of microwaves. Letter grading.

163DA. Microwave and Wireless Design I. (4) Lec-
ture, one hour; laboratory, three hours; outside study,
eight hours. Enforced requisites: courses 101A, 101B.
Course 163DA is enforced requisite to 163DB.
Limited to senior Electrical Engineering majors. Introduction to transmission line-
based circuits and components to address need in in-
dustry and research community for students with mi-
crowave and wireless circuit design experiences.
Standard microwave components and trans-
mision line-based microwave circuits to systems and
modules and to system designers (credit to be given only on completion of course 163DB).

163DB. Microwave and Wireless Design II. (4) Lec-
ture, one hour; laboratory, three hours; outside study,
eight hours. Enforced requisites: courses 101A, 101B,
163DA. Limited to senior Electrical Engineering ma-
jors. Design of radio frequency circuits and systems,
with emphasis on both theoretical foundations and
hands-on experience. Design of radio frequency transceivers and their building blocks according to given specifications or in
form of open-ended problems. Introduction to ad-
nanced topics related to projects through lecture and laboratories.
Creation by students of end-to-end sys-
tems in application context, managing trade-offs across
different types of optical systems while meeting constraints and op-
timizing metrics related to cost, performance, ease of
use, manufacturability, testing, and other real-world
issues. Oral and written presentations of project re-
sults required. In Progress (164DA) and letter (164DB)
grading.

170A. Principles of Photonics. (4) Lecture, four hours;
recitation, one hour; outside study, seven hours. En-
forced requisites: course 101A. Photoelectric effect of
solids foundation on essential principles of photonics
from ground up with minimum prior knowledge on
this subject. Topics include optical properties of ma-
terials, optical wave propagation and modes, optical
interferometers and resonators, optical coupling and
modulation, optical absorption and emission, princi-
ples of lasers and light-emitting diodes, and optical
detection. Letter grading.

170B. Photonic Devices and Circuits. (4) Lecture,
four hours; recitation, one hour; outside study, seven
hours. Enforced requisite: course 170A. Coverage of
core knowledge of practical photonic devices and cir-
cuits. Topics include optical fibers, photodetectors,
optical amplifiers, optical switches, optical modulators,
and optical interconnections. Letter grading.

170C. Photonic Sensors and Solar Cells. (4) Lec-
ture, four hours; recitation, one hour; outside study,
seven hours. Enforced requisite: course 101A. Re-
commended: courses 2, 170A. Fundamentals of de-
tection of light for communication and sensing, as
well as conversion of light to electrical energy in solar
cells. Introduction to radiometry, semiconductor pho-
todetectors, photos and processes of imaging, thermal
detectors, and photovoltaic solar cells of various
forms and materials. Letter grading.

M171L. Data Communication Systems Laboratory.
(2 to 4) (Same as Computer Science M171L.) Labora-
tory, four to eight hours; outside study, two to four
hours. Recommended preparation: course M117L.
Limited to seniors. Not open to students with credit
for course M117. Interpretation of analog-signaling
aspects of digital systems and data communications
through experience in using contemporary test instru-
ments to generate and display signals in relevant lab-
atory setups. Use of oscilloscopes, pulse and func-
tion generators, bandbase spectrum analyzers,
dedicated computers, terminal emulators, and
workstations in experiments on pulse transmission
impairments, waveforms and their spectra, modem
and terminal characteristics, and interfaces. Letter grading.

173DA-173DB. Photonics and Communication De-
design. (4-4) Lecture, one hour; laboratory, three hours;
outside study, eight hours. Introduction to measure-
ment of basic photonic devices, including LEDs, la-
sers, detectors, and amplifiers; fiber-optic fundamen-
tals and measurement of fiber systems. Modulation
iches, including A.M., F.M., phase and sup-
pressed carrier methods. Possible projects include la-
sers, optical communication, and biomedical imaging
and sensing. 173DA. (Formerly numbered 173D.) En-
forced requisite: course 101A. Recommended: course
173DA or Bioengineering C170. Choice of preliminary design, with credit
to be given only on completion of course 173DB).
173DB. Enforced requisites: courses 101A, 173DA.
Finalization of design and testing of projects begun in
course 173DA. Letter grading.

176. Photonics in Biomedical Applications. (4) Lec-
ture, three hours; discussion, one hour; outside study,
eight hours. Enforced requisite: course 101A. Study of
different classes of optical devices and systems with
biomedical applications. Examination of theory in current
and projected biomedical applications. Specific capabili-
ties of photonics to be related to each example. Letter
grading.

180DA-180DB. Systems Design. (4-4) Limited to se-
nior Electrical Engineering majors. Advanced systems
design integrating communications, control, and

180. Special Courses in Electrical Engineering. (4) Seminar; four hours; outside study, eight hours. Special topics in electrical engineering for undergraduate students taught on experimental or temporary basis, such as those taught by resident and visiting faculty members. Letter grading.

180DA. Design of Robotic Systems I. (4) Lecture, four hours; laboratory, two hours; outside study, six hours. Enforced requisite: course 102. Recommended: courses 141 and 142. Open to graduate students only. Limited to senior Electrical Engineering majors. Topics in robotic design include integrated electromechanical design, design for manufacturing (DFM), design software, and design automation. Topics in robotic manufacturing include materials, sensors and actuators, programming, and rapid prototyping. Topics in control include manipulation, motion and path planning, learning and adaptation, and human-robot interaction. Additional topics may include distributed and multi-robot systems, bio-inspired robotics, project management, and societal implications. Open-ended projects vary annually. Students teams create and analyze robotic systems for various applications. Oral and written presentation of project results. In Progress grading (credit to be given only on completion of course 180DB).

180DB. Design of Robotic Systems II. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 180DA. Recommended: courses 141, 142. Limited to senior Electrical Engineering majors. Topics in robotic design include integrated electromechanical design, design for manufacturing (DFM), design software, and design automation. Topics in robotic manufacturing include materials, sensors and actuators, programming, and rapid prototyping. Topics in control include manipulation, motion and path planning, learning and adaptation, and human-robot interaction. Additional topics may include distributed and multi-robot systems, bio-inspired robotics, project management, and societal implications. Open-ended projects vary annually. Students teams create and analyze robotic systems for various applications. Oral and written presentation of project results. Letter grading.

183DA. Design of Robotic Systems I. (4) Lecture, four hours; laboratory, two hours; outside study, six hours. Enforced requisite: course 102. Recommended: courses 141 and 142. Open to graduate students only. Limited to senior Electrical Engineering majors. Topics in robotic design include integrated electromechanical design, design for manufacturing (DFM), design software, and design automation. Topics in robotic manufacturing include materials, sensors and actuators, programming, and rapid prototyping. Topics in control include manipulation, motion and path planning, learning and adaptation, and human-robot interaction. Additional topics may include distributed and multi-robot systems, bio-inspired robotics, project management, and societal implications. Open-ended projects vary annually. Students teams create and analyze robotic systems for various applications. Oral and written presentation of project results. Letter grading.

183DB. Design of Robotic Systems II. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 183DA. Recommended: courses 141, 142. Limited to senior Electrical Engineering majors. Topics in robotic design include integrated electromechanical design, design for manufacturing (DFM), design software, and design automation. Topics in robotic manufacturing include materials, sensors and actuators, programming, and rapid prototyping. Topics in control include manipulation, motion and path planning, learning and adaptation, and human-robot interaction. Additional topics may include distributed and multi-robot systems, bio-inspired robotics, project management, and societal implications. Open-ended projects vary annually. Students teams create and analyze robotic systems for various applications. Oral and written presentation of project results. Letter grading.

M202B. Energy-Aware Computing and Physical Systems. (4) (Same as Computer Science M213B.) Lecture, four hours; outside study, eight hours. Recommended: course M511C. Open to Computer Science majors. Course 183DA is requisite to course M511C. Challenges of digital circuit design and layout in deeply scaled technologies, with focus on design-manufacturing interactions. Summary of large-scale digital design flow; basic manufacturing flow; lithographic patterning, resolution enhancement, and mask preparation; yield and variation modeling; circuit reliability and aging issues; design rules and their origins; layout design for manufacturing; test structures and process control; circuit architecture and its variation mitigation. Letter grading.

M202A. Embedded Systems. (4) (Same as Computer Science M213A.) Lecture; four hours; outside study, eight hours. Enforced requisite: course M115C. Open to Computer Science majors. Course 183DA is requisite to course M511C. Challenges of digital circuit design and layout in deeply scaled technologies, with focus on design-manufacturing interactions. Summary of large-scale digital design flow; basic manufacturing flow; lithographic patterning, resolution enhancement, and mask preparation; yield and variation modeling; circuit reliability and aging issues; design rules and their origins; layout design for manufacturing; test structures and process control; circuit architecture and its variation mitigation. Letter grading.

Special Topics in Circuits and Embedded Systems. (4) Lecture, four hours; outside study, eight hours. Special topics in advanced aspects of circuits and embedded systems, such as digital, analog, mixed-signal, and radio frequency integrated circuits (RF ICs); electronic design automation; wireless communications and systems; embedded processor architectures; embedded software; distributed

181. Special Courses in Electrical Engineering. (4) Seminar; four hours; outside study, eight hours. Special topics in electrical engineering for undergraduate students taught on experimental or temporary basis, such as those taught by resident and visiting faculty members. Letter grading.

184DA-184DB. Independent Group Project Design. (2-2) Laboratory, five hours; discussion, one hour. Enforced requisites: courses M16, 110, 110L. Course 184DA is enforced requisite to 184DB. Courses centered on group project that runs year long to give students intensive experience on hardware design, microcontroller programming, and project coordination. Several concurrent autonomous projects that traverse small mazes and courses offered yearly and target regional competitions. Students may submit proposals that are evaluated and approved by faculty members. Topics include sensing circuits and amplifiers, microcontroller design, microcontroller programming, feedback control, actuation, and motor control. In Progress (184DA) and letter (184DB) grading.

M185. Introduction to Plasma Electronics. (4) (Same as Physics M122.) Lecture, three hours; discussion, one hour; outside study, eight hours. Enforced requisite: course 101A or Physics 110A. Senior-level introductory course on electronics of ionized gases and plasma processes, including generation, diagnostics, and control of coherent radiation and particle beams, and renewable energy sources. Letter grading.
210A. Adaptation and Learning. (4) Lecture, four hours; outside study, eight hours. Preparation: prior training in probability theory, random processes, and linear algebra. Recommended prerequisites: courses 205A, 214A. Mean-square-error estimation and filters, least-squares estimation and filters, steepest-descent algorithms, stochastic-gradient algorithms, convergence, stability, tracking, and performance, algo-
rithms for adaptation and learning, adaptive filters, learning and classification, optimization. Letter grading.

210B. Seminar over Networks. (4) Lecture, four hours; outside study, eight hours. Preparation: prior training in probability theory, random processes, linear algebra. Enforced requisite: course 210A. Adaptation, learning, estimation, and detection theory, including steepest-descent algo-
rithms, stochastic-gradient algorithms, convergence, stability, tracking, and performance analyses. Distri-
buted optimization. Online and distributed adaptation and learning. Synchronous and asynchronous net-

211A. Digital Image Processing I. (4) Lecture, three hours; discussion, one hour; outside study, five hours. Preparation: computer programming exper-
ience. Enforced requisite: course 113. Fundamentals of digital image processing theory and techniques. Topics in-
clude one-dimensional linear system theory, image transforms, and enhancement. Concepts covered in
lectures applied in computer laboratory assignments. Letter grading.

212A. Theory and Design of Digital Filters. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Preparation: computer programming experi-
ence. Enforced requisite: course 113. Approximation of filter specifications. Use of design charts. Structures for recursive digital filters. FIR filter design techniques. Compara-
tion of ideal and practical filters. Implementation of digital filters. Limit cycles. Overflow oscillations. Dis-

212B. Multirate Systems and Filter Banks. (4) Lecture, three hours; outside study, nine hours. Enforced requisite: course 212A. Fundamentals of multirate systems; polyphase representation; multistage implementa-
tions; application to multirate systems; major categories of digital filters. Theoretical applications in
numerical data processing and efficient realization of filter banks. Letter grading.

213A. Advanced Digital Signal Processing Circuit Design. (4) Lecture, four hours; laboratory, two hours; outside study, eight hours. Enforced requisite: course 212A. Digital filter design and optimization tools, architectures for digital signal processing circuits; integrated circuit modules for dig-
ital signal processing; programmable signal proces-
sors; CAD tools and libraries for application-spe-
cific integrated circuit design; case studies of speech and image processing circuits. Letter grading.

214B. Advanced Topics in Speech Processing. (4) Lecture, three hours; computer assignments, two hours; outside study, seven hours. Enforced requisite: course M214A. Advanced techniques used in various speech-processing applications, with focus on speech recognition by humans and machine. Physi-
ology and psychoacoustics of human perception. Dyn-
amic Time Warping (DTW) and Hidden Markov Models (HMM) for automatic speech recognition sys-
tems, pattern classification, and search algorithms. Aids for hearing impaired. Letter grading.


215C. Analysis and Design of RF Circuits and Systems. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 215A. Principles of RF circuit and system design, with emphasis on monolithic im-
plementation in VLSI technologies. Basic concepts, components, and architectures for RF and microwave architec-
tures, low-noise amplifiers and mixers, oscillators, fre-
quency synthesizers, power amplifiers. Letter grading.

215D. Analog Microsystem Design. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 215A. Analysis and design of data conversion inter-
faces and filters. Sampling circuits and architectures, D/A and A/D converters. Control circuits, building blocks, precision techniques, discrete-
and continuous-time filters. Letter grading.

215E. Signaling and Synchronization. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: courses 215A, M216A. Analysis and design of circuits for synchronization and communication for VLSI sys-
tems. Use of both digital and analog design tech-
niques to improve data rates of electronics between functional blocks. Advanced clocking methodologies, phase-locked loop design for clock generation, and high-performance wire-line trans-
mitters, receivers, and timing recovery circuits. Letter grading.

M216A. Design of VLSI Circuits and Systems. (4) (Same as Computer Science M258A) Lecture, four hours; discussion, two hours; laboratory, four hours; outside study, two hours. Enforced requisite: courses M16 or Computer Science M216A, and 115A. Recommended: course 115C. LSI/VLSI design and application in computer systems. Fundamental design techniques that can be used to implement complex integrated systems on chips. Letter grading.

216B. VLSI Signal Processing. (4) Lecture, four hours; outside study, eight hours. Advanced concepts in VLSI signal processing, with emphasis on architec-
tures for high-speed, high-performance digital systems. Advanced clocking methodologies, phase-locked loop design for clock generation, and high-performance wire-line trans-
mitters, receivers, and timing recovery circuits. Letter grading.

M216C. LSI in Computer System Design. (4) (Same as Computer Science M258C) Lecture, four hours; laboratory, two hours; outside study, seven hours. Enforced requisite: course 113. Theory and applications of digital pro-
cessing of speech signals. Mathematical models of human speech production and perception mecha-
nisms, speech analysis/synthesis. Techniques include linear prediction, filter-bank models, and homomor-
phic filtering. Applications to speech synthesis, auto-
matic recognition, and hearing aids. Letter grading.

218. Network Economics and Game Theory. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Discussion of how different coop-
erative and noncooperative games among agents can be constructed to model, analyze, optimize, and strategically influence interactions among agents in different networks and system settings. How strategic agents can successfully compete with each other for limited and time-varying resources by optimizing their deci-
sion-making and learning by exchanging information with other agents. To determine their optimal actions in these distributed, informationally decentralized en-
vironments, agents need to learn and model directly on their interactions with other agents. Discussion of existing multiagent learning techniques and learning in games, including adjustment pro-
cesses for learning equilibria, fictitious play, regret-
learning, and more. Letter grading.

219. Large-Scale Data Mining: Models and Algo-
rithms. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Introduction of variety of scalable data modeling tools, both predictive and causal, from different disciplines. Topics include su-
 pervised and unsupervised data modeling tools from
machine learning, such as support vector machines, different regression engines, and algorithms for regular-
ization and kernel techniques, deep learning, and
Bayesian graphical models. Emphasis on techniques to evaluate relative performance of different methods and their applicability. In-depth studies of tools that explore entire data analysis and modeling cycle: collecting and cleaning large-scale data, deriving pre-
dictive and causal models, and evaluating perfor-
mance of different models. Letter grading.

221A. Physics of Semiconductor Devices I. (4) Lecture, four hours; outside study, eight hours. Phys-
ical principles and design considerations of junction devices. Letter grading.

221B. Physics of Semiconductor Devices II. (4) Lecture, four hours; outside study, eight hours. Princi-
ples and design considerations of field effect devices and charge-coupled devices. Letter grading.

221C. Microwave Semiconductor Devices. (4) Lecture, four hours; outside study, eight hours. Physical principles and design considerations of microwave solid-state devices: Schottky barrier mixer diodes, IMPATT diodes, transferred electron devices, tunnel diodes, microwave transistors. Letter grading.

222. Integrated Circuits Fabrication Processes. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 2. Principles of integrated circuits fabrica-
tion processes. Technological limitations of integrated circuit fabrication. Topics include bulk and epi-
taxial growth, thermal oxidation, diffusion, ion-implan-
tion, chemical vapor deposition, dry etching, lithog-

223. Solid-State Electronics I. (4) Lecture, four hours; outside study, eight hours. Recommended requisite: course 270. Energy band theory, electronic band struc-
ture of various elementary, compound, and alloy semiconductors, defects in semiconductors, Recom-
 bination mechanisms, transport properties. Letter grading.

224. Solid-State Electronics II. (4) Lecture, four hours; outside study, eight hours. Principles of VLSI device design and optimization. Letter grading.

225. Digital Signal Processing I. (4) Lecture, four hours; discussion, one hour; outside study, eight hours. Enforced prerequisite: course 214A. Theoretical aspects of digital signal processing including discrete-time signals and systems, Fourier transforms, correlation, linear prediction, filter-bank models, and homomorphic filtering. Applications to speech synthesis, automatic recognition, and hearing aids. Letter grading.

226. Digital Signal Processing II. (4) Lecture, four hours; discussion, one hour; outside study, eight hours. Theory and applications of digital signal pro-
cessing. Mathematical models of human speech production and perception mechanisms, speech analysis/synthesis. Techniques include linear prediction, filter-bank models, and homomorphic filtering. Applications to speech synthesis, automatic recognition, and hearing aids. Letter grading.

227. Microwave Circuits. (4) Lecture, four hours; outside study, seven hours. Enforced requisite: course 113. Theory and applications of microwave cir-
cuits and embedded systems, such as digital, analog,
mixed-signal, and radio frequency integrated circuits (RF ICs); electromagnetic information; wireless commu-
nication circuits and systems; embedded pro-
cessor architectures; embedded software; distributed sensor and actuator networks; robotics; and em-
bedded systems. May be repeated for credit with topic change. S/U grading.

229. Seminar: Advanced Topics in Solid-State Electronics. (4) Seminar, four hours; outside study, eight hours. Enforced requisite: courses 223, 224. Current re-
search areas, such as radiation effects in semicon-

229S. Advanced Electrical Engineering Seminar. (2) Seminar; two hours; outside study, six hours. Preparation: successful completion of PhD major field examination. Course 232A. Current research topics in solid-state and quantum electronics (Section 1) or in electronic circuit theory and applications (Section 2). Students report on tutorial topic and on research topic that may be repeated for credit. Letter grading.

230A. Detection and Estimation in Communication. (4) Lecture; four hours; discussion, one hour; outside study, eight hours. Requisites: course 131A. Applications of estimation and detection concepts in communication and signal processing; random signal and noise characteristics by analysis and simulation; mean square (MS) and maximum likelihood (ML) estimations and algorithms; detection under ML, Bayes, and Neyman-Pearson (NP) criteria; signal-to-noise ratio (SNR) and error probability evaluations. Introduction to Monte Carlo simulations. Letter grading.


230C. Signal Processing in Communications. (4) Lecture; four hours; outside study, eight hours. Requisites: courses 131A, 230A. Concepts and implementation of signal processing in communication and signal processing systems. Spectral analysis using Fourier transform and windowing, parametric modeling, eigen-decomposition methods, time-frequency analysis, wavelet transform, and sub-band processing. Array processing using beamforming for SNIR enhancement, smart antenna, and source separation and localization. Introduction to compressive sampling and applications. Letter grading.

230D. Algorithms and Processing in Communication Systems. (4) Lecture; four hours; outside study, eight hours. Requisites: courses 131A, 230A. Review of computational linear algebra methods on QRD, eigen-decomposition, singular-value decompositions, and least squares estimation with applications to estimation and detection in communication, radar, speech, image, and array processing systems. Systolic and parallel algorithms and VLSI architectures for high performance and high throughput real-time estimation, detection, decoding, and beamforming applications. Letter grading.

231A. Information Theory: Channel and Source Coding. (4) Lecture; four hours; discussion, one hour; outside study, seven hours. Requisite: course 131A. Fundamental limits on compression and transmission of information. Topics include limits and algorithms for lossless data compression, channel capacity, rate versus distortion in lossy compression, and information theory for multiple users. Letter grading.

231B. Network Information Theory. (4) Lecture; four hours; outside study, eight hours. Enforced requisite: course 231A. Point-to-point multiple-input, multiple-output (MIMO) wireless channels: capacity and outage; single-hop networks: multiple access, broadcast, interference, and relay channels; channels and sources with feedback; basics of coding and lossy data compression; basics of network information flow over general noisy networks. Letter grading.

231E. Channel Coding Theory. (4) Lecture; four hours; outside study, eight hours. Requisite: course 131A. Fundamentals of error control codes and decoding algorithms. Topics include block codes, convolutional codes, trellis codes, and turbo codes. Letter grading.


232B. Telecommunication Architecture and Networks. (4) Lecture; four hours; outside study, eight hours. Requisite: course 131A. Modeling, analysis, and design of queueing systems with applications to switching systems, communications networks, wireless systems and networks, and business and management systems. Modeling, analysis, and design of Markovian and non-Markovian queueing systems. Priority systems, queueing networks with applications to computer communications, Internet, and management networks. Letter grading.

232C. Telecommunication Architecture and Networks. (4) Lecture; four hours; outside study, eight hours. Requisite: course 131A. Modeling, analysis, and design of priority-based queueing system models. Queueing networks, network routing and error control; routing, flow, and access control applications. Applications to local-area, packet-radio, satellite, and computer communication networks. Letter grading.


232E. Graphs and Network Flows. (4) Lecture; four hours; recitation, one hour; outside study, seven hours. Requisite: course 231A. Graph optimization problems, that may be formulated as flow problems in capacity constrained (or cost constrained) networks. Development of tools of network flow theory using graph theoretic methods; application to communication, transport, and transmission problems. Letter grading.

234A. Network Coding Theory and Applications. (4) Lecture; four hours; outside study, eight hours. Algebraic approach and main theorem in network coding, combinatorial aspects of binary alphabet size, linear programming approach and throughput benefits, network code design algorithms, secure network coding, network coding for wireless, other applications. Letter grading.

235A. Mathematical Foundations of Data Storage Systems. (4) Lecture; four hours; outside study, eight hours. Requisite: course 131 or equivalent. Research developments in new mathematical techniques for emerging large-scale, ultra-reliable, fast, and affordable data storage systems. Topics include, but are not limited to, graph-based codes and algebraic codes and decoders for modern storage devices (e.g., Flash), rank modulation, rewritable codes, algorithms for data deduplication and synchronization, and redundant array of independent disks (RAID) systems. Letter grading.


M237. Dynamic Programming. (4) (Same as Mechanical and Aerospace Engineering M276.) Lecture; four hours; outside study, eight hours. Requisite: course 236A or 236B. Introduction to mathematical analysis of sequential decision processes. Finite horizon model in both deterministic and stochastic cases. Finite state infinite horizon model. Methods of solution. Examples from inventory theory, finance, optimal control and estimation, Markov decision processes, combinatorial optimization, communication systems. Letter grading.


239A. Special Topics in Signals and Systems. (4) Lecture; four hours; outside study, eight hours. Special topics in one or more aspects of signals and systems, such as communications, control, image processing, information theory, multimedia, computer networking, optimization, speech processing, telecommunication and networks, and signal processing. May be repeated for credit with topic change. S/U or letter grading.

239BS. Seminar: Signals and Systems. (2 to 4) Seminar; two to four hours; outside study, four to eight hours. Same as Electrical Engineering 239. Seminar: signals and systems. Current and advanced topics in one or more aspects of signals and systems, such as communications, control, image processing, information theory, multimedia, computer networking, optimization, speech pro-
M240A. Linear Dynamic Systems. (4) (Same as Chemical Engineering M260A and Mechanical and Aerospace Engineering M270A.) Lecture, four hours; outside study, eight hours. Requisite: course 141 or Mechanical and Aerospace Engineering 171A. State-space description of linear time-invariant (LTI) and time-varying (LTV) systems in continuous and discrete time. Linear algebra concepts such as eigenvalues and eigenvectors, singular values, Cayley/Hamilton theorem, Jordan form; solution of state equations; stability, controllability, observability, and minimality. Stabilization design via state feedback and observers; separation principle. Connections with transfer function techniques. Letter grading.

240B. Linear Optimal Control. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 141, 240A. Introduction to optimal control, with emphasis on detailed study of LQR, or linear regulators with quadratic cost criteria. Relationships to classical control system design. Letter grading.

M240C. Optimal Control. (4) (Same as Chemical Engineering M280C and Mechanical and Aerospace Engineering M270C.) Lecture, four hours; outside study, eight hours. Requisite: course 240B. Applications of variational techniques in the maximum principle, Hamilton/Jacobi/Bellman equation (dynamic programming) to optimal control of dynamic systems modeled by nonlinear ordinary differential equations. Letter grading.


M248S. Seminar: Systems, Dynamics, and Control Topics. (2) (Same as Chemical Engineering 292ST and Mechanical and Aerospace Engineering M299A.) Seminar, two hours; outside study, six hours. Limited to graduate engineering students. Presentations of research topics by leading academic researchers from fields of systems, dynamics, and control. Students who work in these fields present their papers and results. S/U grading.

M250B. Microelectromechanical Systems (MEMS) Fabrication. (4) (Same as Bioengineering M250B and Mechanical and Aerospace Engineering M260B.) Lecture, three hours; discussion, one hour; outside study, eight hours. Enforced requisite: course M153. Advanced nanofabrication, nanomachining processes used to construct MEMS. Coverage of many lithographic, deposition, and etching processes, as well as their combination in process integration. Materials issues such as compatibility and mechanical properties, and residual/intrinsic stress. Letter grading.

M252. Microelectromechanical Systems (MEMS) Device Physics and Design. (4) (Same as Bioengineering M252 and Mechanical and Aerospace Engineering M260.) Lecture, four hours; outside study, six hours. Introduction to MEMS design, Design methods, design rules, sensing and actuation mechanisms, microfabrication, and microactuators. Designing MEMS to be used in both foundry and nonfoundry processes. Computer-aided design for MEMS. Design project required. Letter grading.

M255. Neuroengineering. (4) (Same as Bioengineering M260 and Neuroscience M206.) Lecture, four hours; laboratory, three hours; outside study, five hours. Requisites: Mathematics 32A, Physics 1B or 6B. Introduction to principles and technologies of bioelectricity and neural signal recording, processing, and stimulation. Topics include bioelectricity, electrophysiology (action potentials, local field potentials, EEG, ECOG), intracellular and extracellular recording, microelectrode technology, neural signal processing (neural signal frequency bands, filtering, spike detection, spike sorting, stimulation artifact removal), brain-computer interfaces, deep-brain stimulation, and prosthetics. Letter grading.


M257. Nanoscience and Technology. (4) (Same as Mechanical and Aerospace Engineering M257.) Lecture, four hours; outside study, eight hours. Enforced requisite: course CM250A. Introduction to fundamentals of nanoscale science and technology. Basic physical principles, nanomaterials, chemical bonding and nanostructures, top-down and bottom-up (self-assembly) nanofabrication; nanocharacterization; nanomaterials, nanoelectronics, and nanobiotechnology. New knowledge and techniques in nano areas to understand scientific principles behind nanotechnology and inspire students to create new ideas in multidisciplinary nano areas. Letter grading.


276S. Seminar: Physical and Wave Electronics. (2 to 4) Seminar, two to four hours; outside study, four to eight hours. May be repeated for credit with topic change. S/U or letter grading.

279BS. Seminar: Physical and Wave Electronics. (2 to 4) Seminar, two to four hours; outside study, four to eight hours. Seminars and discussions on current and advanced topics in two or more aspects of physical and wave electronics, such as electromagnetic, microwave and millimeter electronics, optoelectronics, plasma electronics, microelectromechanical systems, solid state, and nanotechnology. May be repeated for credit with topic change. S/U or letter grading.

279CS. Clean Green IGERT Brown-Bag Seminar. (1) Seminar, one hour. Required of students in Clean Energy for Green Industry (IGERT) Research. Literature seminar presented by graduate students and ex-
The Department of Emergency Medicine focuses on the teaching and management of time-sensitive training situations. A three-week subinternship rotation is offered to fourth-year medical students. The residency program is a full four years.

For details on the Department of Emergency Medicine and a listing of the courses offered, see the department website.

**Emergency Medicine**

**Schoolwide Programs**

Henry Samueli School of Engineering and Applied Science

6425 Boelter Hall
Box 951601
Los Angeles, CA 90095-1601

310-825-9580

http://engineering.ucla.edu

Professor Emeritus

Allen B. Rosenstein, PhD

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Henry Samuel School of Engineering and Applied Science offers the Master of Engineering (MEng) degree (through the Engineering Executive Program), Master of Science (MS) online degree in Engineering, and Engineer (Engr) degree as schoolwide degrees. The following area-specific online degrees have also been established: MS in Engineering-Aerospace, MS in Engineering—Computer Networking, MS in Engineering—Electrical, MS in Engineering—Electronic Materials, MS in Engineering—Mechanical, MS in Engineering—Signal Processing and Communication, and MS in Engineering—Structural Materials.

A certificate of specialization is available in all areas of specialization, except computer science.

**Engineering**

**Lower-Division Courses**

1. Evaluation in Engineering Potential. (2) Seminar, three hours. Limited to students outside of School of Engineering who are seeking to transfer into it. Designed to assess potential for success that students would have in School of Engineering. Series of tests

296. Seminar: Research Topics in Electrical Engineering. (2) Seminar, two hours; outside study, four hours. Advanced study and analysis of current topics in electrical engineering. Discussion of current research and literature in research specialty of faculty member teaching course. May be repeated for credit. S/U grading.

297. Seminar Series: Electrical Engineering. (1) Seminar, 90 minutes; outside study, 90 minutes. Limited to graduate electrical engineering students. Weekly seminars and discussion by invited speakers on research topics of heightened interest. S/U grading.

298. Seminar: Engineering. (2 to 4) Seminar, to be arranged. Limited to graduate electrical engineering students. Seminars may be organized in advanced technical fields. If appropriate, field trips may be arranged. May be repeated with topic change. S/U or letter grading.

299. MS Project Seminar. (4) Seminar, to be arranged. Required of all MS students not in thesis option. Supervised research in small groups or individually under guidance of faculty mentor. Regular meetings, culminating report, and presentation required. Individual contract required; enrollment petitions available in Office of Graduate Student Affairs. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

5495. Teaching Preparation Seminar: Teaching and Writing Pedagogies for Electrical Engineering. (1) (Same as English Composition M495K). Seminar, two hours. Limited to graduate electrical engineering students. Required of all departmental teaching assistants (TAs). May be taken concurrently while holding TA appointment. Seminar on pedagogy and logistics of being a TA with emphasis on student-centered teaching, clear communication, and multimodal teaching and learning. S/U grading.

596. Directed Individual or Tutorial Studies. (2 to 8) Tutorial, to be arranged. Limited to graduate electrical engineering students. Petition forms to request enrollment must be submitted to assistant dean, Graduate Studies. Supervised investigation of advanced technical problems. S/U grading.

597A. Preparation for MS Comprehensive Examination. (2 to 12) Tutorial, to be arranged. Limited to graduate electrical engineering students. Reading and preparation for MS comprehensive examination. S/U grading.

597B. Preparation for PhD Preliminary Examinations. (2 to 16) Tutorial, to be arranged. Limited to graduate electrical engineering students. S/U grading.

597C. Preparation for PhD Oral Qualifying Examination. (2 to 16) Tutorial, to be arranged. Limited to graduate electrical engineering students. Preparation for oral qualifying examination, including preliminary research on dissertation. S/U grading.

598. Research for and Preparation of MS Thesis. (2 to 12) Tutorial, to be arranged. Limited to graduate electrical engineering students. Supervised independent research for MS candidates, including thesis prospectus. S/U grading.


Emergency Medicine / 327

David Geffen School of Medicine

924 Westwood Boulevard, Suite 300
Box 951777
Los Angeles, CA 90095-1777

310-794-0578

http://www.emergencymedicine.ucla.edu

Gregory W. Hendey, MD, Chair

Scope and Objectives

The Department of Emergency Medicine focuses on the teaching and management of time-sensitive training situations. A three-week subinternship rotation is offered to fourth-year medical students. The residency program is a full four years.
and projects designed to test students’ natural skills and abilities to succeed in different engineering environments. P/NP grading.

10A. Introduction to Complex Systems Science. (5) Lecture, four hours; outside study, eight hours. How macroscopic emergent dynamical properties of local interactions of large number of interdependent (often heterogeneous) entities, without global design or control central. Such emergent order, whose explanation can emerge from understanding the level of individual entities, is ubiquitous in biology and human social collectives, but also exists in certain physical processes such as earthquakes and some chemical reactions. Examine models with how such systems undergo sudden changes, including catastrophic breakdowns, in absence of external force or central influence. Key aspect of biological and social collectives is their nature as complex adaptive systems, where individuals and groups adjust their behavior to external conditions. In biological and social systems, complexity science goes beyond traditional mathematics and statistics in its use of multigang computational models that better capture these complex, adaptive, and self-organizing phenomena. Letter grading.

20. First-Year Engineering Transition Bridge. (2) Seminar, 32 hours. Designed primarily for freshmen, students are taught to help them understand UCLA, its culture, structure, and academic policies and to facilitate their transition from high school to college. Examination of research and coursework of college students studying at UCLA versus high school, policies and procedures, and campus resources. Advanced preparation and early exposure to Fall Quarter mathematics, computer science. Junior college. Collaborative learning techniques and community-building activities are integral processes to both day and evening programs. Intensive classroom instruction and collocated collaborative workshops. Offered in summer only. P/NP grading.

21. Computing Immersion Summer Experience. (2) Seminar, 32 hours. Designed primarily for new students to familiarize them with UCLA, its culture, structure, and academic policies and to facilitate their transition from high school to college. Examination of research on first-year experience of college students, studying at UCLA versus high school, policies and procedures, and campus resources. Designed to immerse incoming computing students in foundation concepts and principles of computer science. Focus on fundamental computer programming principles, methodologies, and techniques. Basic concepts of programming and C++ computing language. Offered in summer only. P/NP grading.

22. Summer Bridge Review for Enhancing Eng. Science (120A) and Math Skills (120B) and (120C). (3) Hours. Designed primarily for new students to help them understand UCLA, its culture, structure, and academic policies and to facilitate their transition from high school to college. Examination of research on first-year experience of college students, studying at UCLA versus high school, policies and procedures, and campus resources. Intensive introduction of advanced topics covered in university-level engineering courses. Offered in summer only. P/NP grading.

87. Introduction to Engineering Disciplines. (4) Lecture, four hours; discussion, four hours; outside study, four hours. Introduction to engineering as professional opportunity for freshman students by exploring difference between engineering disciplines and functions engineers perform. Development of skills and techniques for academic excellence through technical writing, presentation, and oral communication. Underlying current effort to increase participation of historically underrepresented groups in U.S. technological work force. Letter grading.

95. Internship Studies in Engineering. (2 to 4) Tutorial, two to four hours. Limited to freshmen/sophomores. Internship studies course supervised by associate dean or designated faculty members. Further supervision by technical corporate organization for which students are doing internship. Students may be required to meet on regular basis with instructor and provide periodic reports of their experience. May not be applied toward major requirements. May be repeated for credit. Individual contract with associate dean required. P/NP grading.

96A. Introduction to Engineering Design. (2) Formerly numbered 96E. Lecture, one hour; laboratory, one hour; outside study, four hours. Introduction to engineering design while building teamwork and communication skills and examination of engineering majors offered at UCLA and of engineering careers. Complete hands-on engineering design projects. Preparation of short report describing projects, and presentation of results. Specific project details and relevant majors explored with instructor. Letter grading.

96B. Introduction to Engineering Design: Digital Imaging. (2) Lecture, one hour; laboratory, one hour; outside study, four hours. Recommended for undergraduate Aerospace Engineering, Bioengineering, Computer Science, Electrical Engineering, and Mechanical Engineering majors. Introduction to engineering design while building teamwork and communication skills and examination of engineering majors offered at UCLA and of engineering careers. Complete hands-on engineering design projects. Preparation of short report describing projects, and presentation of results. Letter grading.

96C. Introduction to Engineering Design: Internet of Things. (2) Lecture, one hour; laboratory, one hour; outside study, four hours. Recommended for undergraduate Aerospace Engineering, Bioengineering, Computer Science, Electrical Engineering, and Mechanical Engineering majors. Introduction to engineering design while building teamwork and communication skills and examination of engineering majors offered at UCLA and of engineering careers. Complete hands-on engineering design projects. Preparation of short report describing projects, and presentation of results. Letter grading.

Upper-Division Courses

101M. Principles of Nanoscience and Nanotechnology. (4) (Same as Materials Science M105.) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: Chemistry 20A, 20B, Physics 1C. Introduction to underlying science encompassing structure, properties, and fabrication of technologically important nanoscale systems. New phenomena that emerge in very small systems (typi- cally, width feature size of nanometer scale) explained using basic concepts from physics and chemistry. Optical, and electronic properties, electron transport, structural stability, self-assembly, and the design and fabrication of various nanoscale structures such as quantum dots, nanoparticles, quantum wires, quantum wells and multilayers, carbon nanotubes. Letter grading.

102. Synthetic Biosystems and Nanosystems Design. (4) Lecture, two hours; outside study, eight hours. Requisites: course M101, Life Sciences 3. Introduction to current progress in engineering to integrate biosciences and nanosciences into synthetic systems where biochemical components are engineered and rewired to perform desirable functions in both intracellular and cell-free environments. Discussion of basic technologies and systems analysis that deal with dynamic behavior, noise, and uncertainties. Design project in which students are challenged to design novel biosystems and nanosystems for non-trivial task required. Letter grading.

M103. Environmental Nanotechnology: Implications and Applications. (4) (Same as Civil Engineering M165.) Lecture, four hours; discussion, two hours; outside study, six hours. Recommended requisite: course M101. Introduction to potential implications of nanotechnology to environmental systems as well as potential application of nanotechnology to environmental protection. Technical contents include three multidisciplinary areas: (1) physical, chemical, and biological properties of nanomaterials, (2) transport opportunity of nanoscale materials in natural environmental systems, and (3) use of nanotechnology for energy and water production, plus environmental protection, monitoring, and remediation. Letter grading.

110. Introduction to Technology Management and Economics for Engineers. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Fundamental principles of micro-level (individual, firm) and macro-level (government, international) economics as they relate to technology management. How individuals, firms, and governments impact successful commercialization of high-technology products and services. Letter grading.

111. Introduction to Finance and Marketing for Engineers. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Critical components of finance and marketing research and practice as they impact management of technology commercialization. Examination of internal (within firm) and external (in marketplace) marketing and financing of high-technology innovation. Concepts include present value, future value, discounted cash flow, internal rate of return, return on assets, return on equity, return on investment, interest rates, cost of capital, and product price, positioning, and promotion. Use of market research, segmentation, and forecasting in management of technological innovation. Letter grading.

112. Laboratory to Market, Entrepreneurship for Engineers. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Designed for seniors/juniors. Introduction to current management concept of product development. Topics include product strategy, product platform, and product lines; competitive strategy; vectors of differentiation, product pricing, first-to-market versus fast-follower; growth strategy, growth through acquisition, and new ventures; portfolio management. Case studies, critical components, and discussions, and guest lectures by speakers from industry. Letter grading.

116. Statistics for Management Decisions. (4) Lecture, four hours; outside study, four hours. Designed primarily for managers as well as engineering decisions nearly always take place in environment characterized by uncertainty. Probability provides mathematical framework for understanding conditional probability. Topics include decision-making when outcomes of actions are uncertain. Application of probability to problem of reasoning from sample data, encompassing estimation, hypothesis testing, and regression analysis. Introduction of decision-analytical techniques needed in later courses in program. Development of basic understanding of statistical analysis. Letter grading.

120. Entrepreneurship for Scientists and Engineers. (4) Seminar, two hours; outside study, four hours. Designed for seniors and graduate students. Identification of business opportunities and outline of
basic requisites for viable business plans, followed by specific topics related to securing basic assets and resources needed to execute those plans. P/NP grading.

180. Engineering of Complex Systems. (4) Lecture, four hours; discussion, two hours; outside study, six hours. This course covers junior/senior engineering methods. Holistic view of engineering discipline, covering life-cycle of engineering, processes, and techniques used in industry today. Multidisciplinary systems engineering perspective in which aspects of electrical, mechanical, material, and software engineering are incorporated. Three specific case studies in communicative, sensor, and present engineering included to help students understand these concepts. Special attention paid to link material covered to engineering curriculum offered by UCLA to help students integrate and enhance their understanding of knowledge already acquired. Motivation of students to continue their learning and refine lifelong learning habits. Letter grading.

183EW. Engineering and Society. (4) Lecture, four hours; discussion, three hours; outside study, five hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 185EW. Limited to 30 students. Promotes engineering for the benefit of humanity. Professional and ethical considerations in practice of engineering. Impact of technology on society and on development of moral and ethical values. Contemporary ethical, legal, and other issues created by new technologies. Emphasis on research and writing within engineering environments. Writing and revision of about 20 pages total, including two individual technical essays and one team-written research report. Readings address technical issues and writing form. Satisfies engineering writing requirement. Letter grading.

185EW. Art of Engineering Endeavors. (4) Lecture, four hours; discussion, three hours; outside study, five hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 185EW. Designed for junior/senior engineering students. Non-technical skills and experiences necessary for engineering career success. Importance of group dynamics in engineering practice. Teamwork and effective group skills in engineering environments. Organization and control of multidisciplinary complex engineering projects. Forms of leadership and qualities and characteristics of effective leaders. How engineers develop their behavioral skills and attitudes to major ethical and social issues. Societal demands on practice of engineering. Emphasis on research and writing in engineering environments. Satisfies engineering writing requirement. Letter grading.

188. Special Courses in Engineering. (4) Seminar, four hours; outside study, eight hours. Special topics in engineering for undergraduate students taught on experimental or temporary basis, such as those taught by resident and visiting faculty members. May be repeated for credit with topic or instructor change. Letter grading.

190. Directed Research in Engineering. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit with school approval. Enrollment petitions available in Office of Academic and Student Affairs. Letter grading.

Graduate Courses

200. Program Management Principles for Engineers and Professionals. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students. Practical review of necessary processes and procedures to successfully manage technology programs. Review of program planning, organizational structure, implementation, and performance tracking methods to provide program manager with necessary information to support decision-making process that provides high-quality products on time and within budget. Letter grading.

201. Systems Engineering. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students. Practical coverage of elements of system engineering process. Coverage of key elements: system requirements and flowdown, product development cycle, functional analysis, system synthesis and trade studies, risk management, management metrics, and audit and documentation. Letter grading.

202. Reliability, Maintainability, and Supportability. (4) Lecture, four hours; outside study, eight hours. Required: course for graduate students. Emphasis on one to two years work experience. Integrated logistic support (ILS) is major driver of system life-cycle cost and one key element of system engineering activities. Overview of engineering disciplines critical to this function—reliability, maintainability, and supportability—and their relationships, taught using probability theory. Topics also include fault detections and isolation decisions. Discussion of 6-sigma process, one effective design and manufacturing methodology, to ensure system reliability, maintainability, and supportability. Letter grading.

203. System Architecture. (4) Lecture, four hours; outside study, eight hours. Required: course for graduate students. Designed for graduate students with BS degrees in engineering or science and one to two years work experience in selected domain. Art and science of architecting software with paradigms and tools. Principles of architecting through analysis of architecture designs of major existing systems. Discussion of discipline of architecture: practices, such as representation models, design progression, and architecture frameworks. Examination of professionalization of system architecting. Letter grading.

204. Trusted Systems Engineering. (4) Lecture, four hours; outside study, eight hours. Trust is placed in information systems to behave properly, but cyber threats and breaches have become routine, including penetration of financial, medical, government, and national security systems. To build systems that can protect confidentiality, integrity, and availability involves more than composing systems from network security components—security, cryptography, etc. One can use most secure components, and resulting system could still be vulnerable. Skills learned ensure that systems are architected, designed, implemented, operated, and supported. Conceptual framework and vocabulary. Individual projects enable students to develop basic skills for creating SysML requirements and structural and behavioral diagrams. In group project students learn how to package, compartmentalize, and integrate smaller efforts while being constrained to meet specific schedules. Industry-relevant knowledge may be obtained, as course covers Object Management Group (OMG) Certified Systems Modeling Professional (OCSPM) tests, such as Model User and Model Builder Fundamentals and Model Builder Intermediate. Letter grading.

206. Engineering for Systems Assurance. (4) Lecture, four hours; outside study, eight hours. Required: course for graduate students. Course covers essential elements of assurance. Emphasis on functional systems assurance applies to military realm such as air traffic control, Supervisory Control and Data Acquisition (SCADA), and autonomous vehicles to military realm such as command, control, communication, intelligence, and cyber. Letter grading.

210. Operations and Supply Chain Management. (4) Lecture, four hours; outside study, eight hours. Introduction to strategic planning and decision making involved in managing enterprises. Operational processes use organization’s resources to transform inputs into goods and utilize them to provide service, or both. Conceptual framework and set of analytical tools provided to enable students to better understand why processes behave as they do. Given this understanding, students are able to involve themselves in organization design decisions, those related to key processes affecting organization unit’s performance. Letter grading.

211. Financial Management. (4) Lecture, four hours; outside study, eight hours. Introduction to concepts reflecting material generally covered in certain MBA core and elective courses. Integration of both theory—to introduce essential conceptual building blocks in accounting and finance—and empirical practice. Concepts and tools learn by using real-world databases. Letter grading.

212. Intellectual Property Law and Strategy. (4) Lecture, four hours; outside study, eight hours. Prior knowledge of legal doctrines or materials not required. Intellectual property law is not just topic for lawyers. Engineers who have design responsibilities must know how legal system in some instances protects their designs and in other instances stands as obstacle to what would otherwise be efficient design choice. Engineers with management responsibilities must understand intellectual property law implications for everything from pricing to strategic partnerships. Examination is not law, not only by learning fundamental rules associated with patent, copyright, trademark, and trade secret protection, but by studying business strategies that these rules support. Examines major principles to be taken from content access, technology, and pharmaceutical industries. Letter grading.

213. Data and Business Analytics. (4) Lecture, four hours; outside study, eight hours. Coverage of wide variety of spreadsheet matrices and models used to solve business and engineering problems, with emphasis on mastery of Excel spreadsheet modeling as integral part of analytic decision making. Managerial models include data analysis and forecasting, linear programming, network and distribution models, integer programming, nonlinear programming, and Monte Carlo simulation. Problems from op-
erations, finance, and marketing taught by spreadsheet examples and describes general managerial situations from various industries and disciplines. Development of spreadsheet models to facilitate decision making. Letter grading.

214. Management Communication. (4) Lecture, four hours. Exploration of knowledge, attributes, skills, and strategies necessary to succeed communicatively in workplace, with focus on business presentation skills, visual and verbal persuasion skills, and interpersonal communication skills. Letter grading.

215. Entrepreneurship for Engineers. (4) Lecture, four hours; outside study, eight hours. Limited to graduate engineering students. Topics in starting and developing new enterprises and intended for students who wish to complement their technical education with introduction to entrepreneurship. Letter grading.

299. Capstone Project. (4) Activity, 10 hours. Preparation: completion of minimum of four 200-level courses in online MS program. Project course that satisfies UCLA final comprehensive examination requirement of MS online degree in Engineering. Project is completed under individual guidance from UCLA Engineering faculty member and incorporates advanced knowledge learned in MS program of study. Letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

470A-470D. Engineer in Technical Environment. (3 each) Lecture, three hours; outside study, six hours. Limited to Engineering Executive Program students. Theory and application of quantitative methods in analysis and synthesis of engineering systems for graduate engineering students. Topics in starting and individual projects. S/U or letter grading.

471A-471B-471C. Engineer in General Environment. (3-3-3.5) Lecture, three hours (courses 471A, 471B) and 90 minutes (course 471C). Limited to Engineering Executive Program students. Language of business for engineering executive. Accounting, financial, business economics, business law, and marketing. Laboratory in organization and management problem solving. Analysis of actual business problems of firm, community, and nation, provided through cooperation and participation with California business corporations and government agencies. In Progress (472A, 472C) and S/U or letter grading (credit to be given on completion of courses 472B and 472D).

473A-473B. Analysis and Synthesis of Large-Scale System. (3-3) Lecture, two and one half hours; outside study, six hours. Limited to Engineering Executive Program students. Problem area of modern industry or government is selected as class project, and its solution is synthesized using quantitative tools and methods. Project also serves as laboratory in organization for goal-oriented technical group. In Progress (473A) and S/U (473B) grading.

495A. Teaching Assistant Training Seminar. (4) Seminar, four hours; outside study, eight hours. Preparation; appointment as teaching assistant. Limited to graduate engineering students. Seminar in communication of engineering principles, concepts, and methods, preparation, organization of material, presentation, use of visual aids, grading, advising, and rapport with students. S/U grading.

M495. Teaching Preparation Seminar: Writing for Engineers. (2) (Formerly numbered M495SC.) (Same as English Composition M495S.) Seminar, two hours; outside study, four hours. Limited to graduate students. Required of all teaching assistants for Engineering courses not exempt by appropriate departmental or program training. Training and mentoring, with focus on composition pedagogy, assessment of student writing, guidance of revision process, and specialized writing problems that may occur in engineering writing contexts. Practical concerns of preparing students to write course assignments, marking and grading essays, and conducting peer reviews and conferences. S/U grading.

M495J. Supervised Teaching of Writing for Engineers. (2) (Formerly numbered M495JC.) (Same as English Composition M495J.) Seminar, one hour; outside study, five hours. Enforced requisite: course M495J. Required of all teaching assistants in their initial term of teaching Engineering writing courses. Mentoring in group and individual meetings. Continued focus on composition pedagogy, assessment of student writing, guidance of revision process, and specialized writing problems that may occur in engineering writing contexts. Practical concerns of preparing students to write course assignments, marking and grading essays, and conducting peer reviews and conferences. S/U grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate advisor and faculty mentor. Credit to be given on completion of courses 472B (Progress 472A, 472C) and S/U or letter grading. In Progress (472A, 472C) and 90 minutes (course 472D). Limited to Engineers. (2)

ENGLISH

College of Letters and Science

149 Humanities Building
Box 951530
Los Angeles, CA 90095-1530

310-825-4173
information@english.ucla.edu
http://www.english.ucla.edu

Lowell Gallagher, PhD, Chair

Professors
Blake Allmendinger, PhD
Ali Behdad, PhD (John Charles Hills Professor of Literature)
Albert R. Braunmuller, PhD
Joseph E. Bristow, PhD
King-Kok Cheung, PhD
Christine N. Chism, PhD
Michael J. Colacurcio, PhD
Frederick M. D’Aguirre, BA
Elizabeth M. DeLoughrey, PhD
Helen E. Deutsch, PhD
Barbara Fuchs, PhD
Lowell Gallagher, PhD
Alicia Gaspar de Alba, PhD
Jonathan H. Grossman, PhD
Ursula K. Heise, PhD (Marcia H. Howard Term Professor of Literary Studies)
Eric J. Sundquist, PhD (UCLA Foundation Professor Emeritus)

Assistant Professors
Louise E. Hornby, PhD
Carrie L. Hyde, PhD
Juan L. Sánchez, PhD
Arvind Thomas, PhD
Justin J. Torres, MFA

Senior Lecturers
Jerome Cushman, AB, BSLS, Emeritus
Stephen J. Dickey, PhD
David Stuart Rodes, PhD, Emeritus

Emeritus
Karen E. Rowell, PhD, Emeritus

Adjunct Associate Professors
Jeffrey L. Decker, PhD
Mitchum A. Huehls, PhD

Mark L. Seltzer, PhD (Evan Frankel Endowed Professor of English)
Jennifer A. Sharpe, PhD
Debora K. Shuger, PhD
Mona E. Simpson, MFA
Robert N. Watson, PhD
Richard A. Yarbrough, PhD

Professors Emeriti
Michael J.B. Allen, PhD, DLitt
Martha Banta, PhD
Charles L. Batten, Jr., PhD
Calvin B. Bedient, PhD
Charles A. Berst, PhD
Frederick L. Burwick, PhD
Edward I. Condren, PhD
Patrick K. Ford, PhD
Robert A. Georges, PhD
Gerald J. Goldberg, PhD
James E. Goodwin, PhD
Christopher W. Grose, PhD
George R. Guffee, PhD
N. Katherine Hayles, PhD (John Charles Hills Professor Emerita of Literature)
Mark I. Seltzer, PhD (Evan Frankel Endowed Professor of English)

Adjuncts
Allison B. Carruth, PhD
Michael C. Cohen, PhD
Matthew N. Fisher, PhD
Yogita Goyal, PhD
Sarah T. Karem, PhD
Arthur L. Littie, Jr., PhD
Marissa K. Lopez, PhD
Robert M. Maniquis, PhD
Uri G. McMillan, PhD
Ahmad J. Nersessian, PhD
Kenneth Reinhard, PhD
Brian K. Stefanis, MFA
Caroline A. Streeter, PhD

Associate Professors
Allison B. Carruth, PhD
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Matthew N. Fisher, PhD
Yogita Goyal, PhD
Sarah T. Karem, PhD
Arthur L. Littie, Jr., PhD
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Senior Lecturers
Karen J. Cunningham, PhD
Christopher M. Mott, PhD

Lecturers
Joseph A. Dimuro, PhD
Michelle R. Huneven, MFA

Adjunct Associate Professors
Jeffrey L. Decker, PhD
Mitchum A. Huehls, PhD
Scope and Objectives

The Department of English is dedicated to the study of the literatures and cultures of those parts of the world in which English is a primary language. Although committed to no single method or approach, the department requires a knowledge of British, American, and Anglophone literary history and an engagement with a range of methodological approaches that foster intellectual curiosity and critical thinking and encourage its students to be not only expert readers and writers but engaged and ethical citizens.

An understanding and appreciation of literature can furnish lifelong rewards. In addition to offering students such personal benefits, the department seeks to foster critical analysis and lucid writing and to teach them to think about how language and representation function in the world. Such skills are essential to success in a variety of professions for which the major in English can provide excellent preparation, including law, administration, business, teaching, media, and entertainment.

Within the BA degree in English, qualified students may elect a concentration in creative writing. The department also offers a Bachelor of Arts degree in American Literature and Culture.

When selecting courses to fulfill requirements for the majors, students are expected to choose those that best reflect their own interests and simultaneously contribute toward a coherent program in literary studies.

A graduate program leading to the Master of Arts degree is available for students who wish to continue the study of literature at an advanced level. A parallel program continues to the PhD degree. Because the PhD program may require five years or more, it is intended only for qualified students who are seriously committed to advanced literary scholarship and, in some cases, to a career in college or university teaching.

Undergraduate Study

Students must have completed the Entry-Level Writing requirement before taking any courses in English (other than English Composition A or 2). For further information regarding Entry-Level Writing, see the Undergraduate Study chapter of this catalog.

The English major and American Literature and Culture major are designated capstone majors. Students in both majors have the option of completing a capstone seminar or other culminating work that enables them to use knowledge and skills acquired through previous coursework to engage, under the guidance of a faculty member, in literary research or other creative projects that result in a final paper or other product.

Extra-Departmental Requirement in Foreign Literature or Foreign Language

All English majors must have completed either (1) level five or equivalent in any one foreign language or (2) level three or equivalent in one foreign language and two additional courses in foreign language or foreign literature, including foreign literature in translation (see course listings under Foreign Literature in Translation later in this section). Transfer students who have satisfied the College of Letters and Science foreign language requirement at the high-school level through the IGERTC program may satisfy the departmental requirement with five foreign literature in translation courses. The courses may be taken on a P/NP grading basis.

English BA

Capstone Program

The Bachelor of Arts degree in English has an optional concentration in creative writing for students who have been admitted to and completed three creative writing workshops in a single genre of either poetry or short story. Students are expected to meet with the undergraduate counselors and undergraduate faculty adviser to plan and follow a course of study that incorporates their interests and goals with the fulfillment of requirements for the degree.

Preparation for the Major

Required: English Composition 3, English 4W or 4HW or 4WS, 10A, 10B, 10C taken in the stated sequence (each course is a requisite for the next course). A grade of C or better is required in each course.

Transfer Students

Transfer applicants to the American Literature and Culture major must be 4 or 5 units and be taken for a grade of C or better. All other requirements remain the same. English M138 cannot satisfy any breadth or workshop requirements in the concentration and may only be applied toward the basic English major. Students may declare creative writing as a concentration only after they have completed three creative writing workshops in a single genre of either poetry or short story. Students may not enroll in more than one workshop (course 136, 137, or M138) per term or in more than two workshops with the same instructor. No student may take for credit more than three poetry or short story workshops. Students planning to select this program should contact the departmental counselor for more details.

Creative Writing Concentration

The creative writing concentration consists of the same requirements as the major, with the exception that one breadth course must be taken from the creative writing area (English 136, 137), and both electives must be creative writing workshops (courses 136, 137). All other requirements remain the same. English M138 cannot satisfy any breadth or workshop requirements in the concentration and may only be applied toward the basic English major. Students may declare creative writing as a concentration only after they have completed three creative writing workshops in a single genre of either poetry or short story. Students may not enroll in more than one workshop (course 136, 137, or M138) per term or in more than two workshops with the same instructor. No student may take for credit more than three poetry or short story workshops. Students planning to select this program should contact the departmental counselor for more details.

American Literature and Culture BA

Capstone Program

Students are expected to meet with the undergraduate counselors and undergraduate faculty adviser to plan and follow a course of study that incorporates their interests and goals with the fulfillment of requirements for the degree.

Preparation for the Major

Required: English Composition 3, English 4W or 4HW or 4WS, 10A, 10B, 10C taken in the stated sequence (each course is a requisite for the next course). A grade of C or better is required in each course.

Transfer Students

Transfer applicants to the American Literature and Culture major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one English composition course, one American literature course, one English critical reading and writing course, one year of English literature survey courses, and two years of one foreign language or foreign literature, including foreign language in translation courses. The student must complete five foreign language in translation courses. The courses may be taken on a P/NP grading basis.

English / 331
Honors Program

Admission

The honors program is open to departmental majors with a 3.5 departmental and a 3.25 overall grade-point average. Students with lower GPAs may petition for admission to the program, but these grade-point averages must be achieved before graduation in order to qualify for honors. Students should apply by winter quarter of the junior year. For application forms and further information, contact the departmental counselor.

Requirements

All honors students are required to take one theory course from English 120 through 128 (may fulfill one of three required breadth courses) no later than winter quarter of the junior year. Students in the creative writing concentration are required to have completed or been accepted into their third workshop in a single genre prior to or concurrent with enrollment in course 191H. In spring quarter of the junior year, students must take course 191H (may fulfill one of two electives for the major). During fall and winter quarters of the senior year, they take courses 198A and 198B, in which they write a thesis under the direction of a faculty member (198B may fulfill the second of two electives for the major). The thesis determines whether they receive highest honors, honors, or no honors.

English Minor

The English minor is designed for students who wish to enhance their major program with the benefits of intensive study of English language and literatures, including a better understanding and appreciation of literatures in English and improvement in critical thinking, reading, and writing skills.

To enter the minor, students must have an overall grade-point average of 2.0 or better, have completed English 10A with a grade of C or better, and have satisfied the English Composition 3 requirement and completed English 4W. Students must file a petition to declare the minor by meeting with a student affairs officer in the Undergraduate Counseling Office, 158/160 Humanities Building, 310-825-1389. This allows them priority enrollment in many upper-division courses.

Required Lower-Division Courses (10 units): English 10B and M30 (or M30SL), with grades of C or better.

Required Upper-Division Courses (20 to 23 units): (1) English 118E and either course M118F or one additional 118E course on a different topic or one other English course that has a primary focus on environmental issues to be selected from a list available in the Undergraduate Counseling Office prior to the opening of enrollment each term (students may petition to substitute other courses), (2) one course selected from American Indian Studies C178, Anthropology 133, 165P, Art History 133D, 133E, C145A, Chicana and Chicano Studies M144, M183, Honors Collegium 141, 174, Italian 124, Public Policy C115, Russian 122, Urban Planning 120, or 121, (3) one course selected from Atmospheric and Oceanic Sciences 141, Earth, Planetary, and Space Sciences 101, Ecology and Evolutionary Biology 116, M131, 154, 176, Environment M109, M111, M130, M132, M133, M134, M137, 150, M153, 157, 159, M161, 163, M164, 166, M167, or Environmental Health Sciences 100, (4) one course selected from English 184, 195CE, 197, 198A, 198B, or 199 that culminates in a project focused primarily on literature from an eco-cultural or other environmentally focused perspective.

Students may petition to substitute an internship course/independent study/directed research course (195CE, 197, 198, or 199) for an elective course as long as it is clearly and predominantly relevant to the topics covered in the minor and falls within the discipline of the requirement for which it serves as a substitute. No more than one upper-division independent study/directed research course (4 or 5 units) may be applied toward the minor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor. At least 15 upper-division units applied toward the minor must be taken in residence during the regular academic year (excluding summer sessions) at UCLA. Transfer credit is subject to department approval; consult with the undergraduate counselors before enrolling in any courses for the minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Literature and Environment Minor

The Literature and Environment minor provides students with both a solid foundation for literary interpretation and a superstructure that integrates those skills and perspectives with the questions about the past, present, and future of the biosphere. It is designed for undergraduates who wish to enhance their major program with intensive study of literature in its relationship to the natural environment, while improving their skills in reading, writing, creative and critical thinking, and analysis of complex situations in an ethical frame. The minor examines how different cultural forms (for example, fiction, journalism, poetry, film, design, and other arts) represent environmental issues, including biodiversity, animal studies, wilderness, food, urban ecologies, postcolonial ecologies, environmental justice, and climate change.

To enter the minor, students must be in good academic standing with an overall grade-point average of 2.0 or better and have completed English 10A with a grade of C or better. Students must file a petition to declare the minor by meeting with a student affairs officer in the Undergraduate Counseling Office, 158/160 Humanities Building, 310-825-1389. For more information, see the minor website.

Required Lower-Division Courses (10 units): English 10B and M30 (or M30SL), with grades of C or better.

Required Upper-Division Courses (20 to 23 units): (1) English 118E and either course M118F or one additional 118E course on a different topic or one other English course that has a primary focus on environmental issues to be selected from a list available in the Undergraduate Counseling Office prior to the opening of enrollment each term (students may petition to substitute other courses), (2) one course selected from American Indian Studies C178, Anthropology 133, 165P, Art History 133D, 133E, C145A, Chicana and Chicano Studies M144, M183, Honors Collegium 141, 174, Italian 124, Public Policy C115, Russian 122, Urban Planning 120, or 121, (3) one course selected from Atmospheric and Oceanic Sciences 141, Earth, Planetary, and Space Sciences 101, Ecology and Evolutionary Biology 116, M131, 154, 176, Environment M109, M111, M130, M132, M133, M134, M137, 150, M153, 157, 159, M161, 163, M164, 166, M167, or Environmental Health Sciences 100, (4) one course selected from English 184, 195CE, 197, 198A, 198B, or 199 that culminates in a project focused primarily on literature from an eco-cultural or other environmentally focused perspective.

Students may petition to substitute an internship course/independent study/directed research course (195CE, 197, 198, or 199) for an elective course as long as it is clearly and predominantly relevant to the topics covered in the minor and falls within the discipline of the requirement for which it serves as a substitute. No more than one upper-division independent study/directed research course (4 or 5 units) may be applied toward the minor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor. Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of English offers Master of Arts (MA), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in English.
English

Lower-Division Courses

4HW. Critical Reading and Writing (Honors). (5) Lecture, four hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Introduction to literary analysis, with close reading and carefully written exposition of selections from principal modes of literature: poetry, prose fiction, and drama. Minimum of three papers (three to five pages each) and two in-class essays. Satisfies Writing II requirement. Letter grading.

4W. Critical Reading and Writing (Service Learning). (5) Lecture, four hours; fieldwork, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Introduction to literary analysis, with close reading and carefully written exposition of selections from principal modes of literature: poetry, prose fiction, and drama. Minimum of 15 to 20 pages of revised writing. Satisfies Writing II requirement. Letter grading.

M30. Environmental Literature and Culture. (5) (Same as Environment M30.) Lecture, three hours; discussion, one hour. Enforced requisite: satisfaction of Entry-Level Writing requirement. Introduction to core themes, questions, and methods within interdisciplinary field of environmental humanities. Examination of how different culture forms (e.g., fiction, journalism, poetry, visual art) represent environmental issues. Topics may include biodiversity, wilderness, food, urban ecologies, postcolonial ecologies, environmental justice, and climate change. P/NP or letter grading.

M30SL. Environmental Literature and Culture (Service Learning). (5) (Same as Environment M30SL.) Lecture, three hours; discussion, one hour; fieldwork, two hours. Enforced requisite: satisfaction of Entry-Level Writing requirement. Introduction to core themes, questions, and methods within interdisciplinary field of environmental humanities. Examination of how different culture forms (e.g., fiction, journalism, poetry, visual art) represent environmental issues. Topics may include biodiversity, wilderness, food, urban ecologies, postcolonial ecologies, environmental justice, and climate change. Service learning component includes meaningful work with off-campus agency selected by instructor. Satisfies Writing II requirement. Letter grading.

10A. Literatures in English to 1700. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H, English 4W or 4HW. Survey of major writers and genres, with emphasis on tools for literary analysis such as close reading, argumentation, historical and social context, and critical writing. Minimum of three papers (three to five pages each) or equivalent required. P/NP or letter grading.

10B. Literatures in English, 1700 to 1850. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H, English 4W or 4HW. Survey of major writers and genres, with emphasis on tools for literary analysis such as close reading, argumentation, historical and social context, and critical writing. Minimum of three papers (three to five pages each) or equivalent required. P/NP or letter grading.

10C. Literatures in English, 1850 to Present. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H, English 4W or 4HW, 10A, 10B. Survey of major writers and genres, with emphasis on tools for literary analysis such as close reading, argumentation, historical and social context, and critical writing. Minimum of three papers (three to five pages each) or equivalent required. P/NP or letter grading.

20W. Introduction to Creative Writing. (4) Lecture, four hours; discussion, one hour (when scheduled). Preparation: submission of creative or expository writing samples to screening committee. Enforced requisite: satisfaction of Entry-Level Writing requirement, English Composition 3. Not open for credit to students with credit for course 20W. Designed to introduce fundamentals of creative writing. Emphasis either on poetry, fiction, or drama, depending on wishes of instructor(s) during any given term. Readings from assigned texts and weekly writing assignments. P/NP or letter grading.

20W. Introduction to Creative Writing. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: satisfaction of Entry-Level Writing requirement, English Composition 3. Not open for credit to students with credit for any courses in 170 series. Introduces students to a wide range of reading and writing in the genre of poetry, prose, and drama. P/NP or letter grading.

88A–88Z. Lower-Division Seminars: Special Topics in English. (5 each) Seminar, three hours. Limited to 15 students. Content varies; see departmental counselor for information. P/NP or letter grading. 88A. Medieval Literature. 88B. Renaissance Literature. 88C. 17th-Century Literature. 88D. 18th-Century Literature. 88E. Romantic Literature. 88F. Victorian Literature. 88G. 20th-Century British Literature. 88H. Colonial American Literature. 88I. 19th-Century American Literature. 88J. 20th-Century American Literature. 88K. History of English Language. 88L. Folklore and Mythology. 88M. Literature and Society. 88SL. Service Learning. Seminar, three hours; fieldwork, three hours. Textual analysis, analytical writing, and oral presentations. Required written assignments in a seminar where students will analyze and discuss literary texts and relate them to contemporary issues. P/NP or letter grading.

90. Shakespeare. (5) Lecture, three hours; discussion, one hour. Enforced requisite: satisfaction of Entry-Level Writing requirement. Recommended for students with credit for course 150A or 150B. Survey of Shakespeare’s plays, including comedies, tragedies, and histories, selected to represent Shakespearean creativity, diversity, and thematic richness. Minimum of three papers (three to five pages each) or equivalent required. P/NP or letter grading.

101A. Introduction to Poetry. (5) Lecture, three hours; discussion, one hour. Enforced requisite: satisfaction of Entry-Level Writing requirement. Recommended for instructional credential candidates. Study of critical issues (metrics, diction, figurative language, symbolism, irony and ambiguity, form and structure) and aesthetic issues, including evaluative criteria, followed by close critical analysis of selection of representative poems. P/NP or letter grading.

101B. Introduction to Drama. (5) Lecture, three hours; discussion, one hour. Enforced requisite: satisfaction of Entry-Level Writing requirement. Examination of representative plays; readings may range from Greek to modern drama. Emphasis on critical approaches to dramatic text; study of issues such as plot construction, character development, and connotes. P/NP or letter grading.

101C. Introduction to Fiction. (5) Lecture, three hours; discussion, one hour. Enforced requisite: satisfaction of Entry-Level Writing requirement. Introduction to prose narrative, its techniques and forms. Analysis of short and long narratives and of critical issues such as plot, characterization, setting, narrative voice, realism and nonrealism, and moral issues. P/NP or letter grading.

97H. Honors Research Seminar for Freshmen and Sophomores. (4) Seminar, three hours. Enforced requisite: English Composition 3, English 4W (or 4HW). Recommended for lower-division students who desire familiarity with research. May not be repeated for credit. P/NP or letter grading.

Upper-Division Courses

104. Introduction to Ethnic Studies. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: satisfaction of Entry-Level Writing requirement. Introduction to interdisciplinary study of race and ethnicity, with primary focus on literature. Through examination of institutions that form understanding of race—citizenship, nationalism, class, gender, and race—interrogation of how we come to think of ourselves and others as having race, and effects of such racialized thinking. Course is not about any particular racial or ethnic group, but highbrow and lowbrow categories and their effects on cultural production. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M101A. Premodern Queer Literatures and Cultures. (5) Same as Gender Studies M101A and Lesbian, Gay, Bisexual, Transgender, and Queer Studies M101A. Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3. Survey of discrete period of queer litera-
tured from beginning to circa 1850. Works by such writers as Sappho, Plato, Marlowe, Shakespeare, and Thomas Gray may be included. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M101B. Queer Literatures and Cultures, 1850 to 1970. (5) (Same as Gender Studies M105B and Lesbian, Gay, Bisexual, Transgender, and Queer Studies M101B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of discrete period of queer literature and culture from circa 1850 to 1970. Works by such authors as Walt Whitman, Radcliffe Hall, Gertrude Stein, Virginia Woolf, Langston Hughes, Nella Larsen, Zora Neale Hurston, Richard Wright, Anna Deavere Smith, June Jordan, and Rita Dove. P/NP or letter grading.

M101C. Queer Literatures and Cultures after 1970. (5) (Same as Gender Studies M105C and Lesbian, Gay, Bisexual, Transgender, and Queer Studies M101C.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3. Examination of cultural production, specifically literature, produced by queers after Stonewall rebellion in New York in 1969, widely regarded as origins of or beginning of gay and lesbian rights movement in U.S. Writings and films by such authors as Andrew Holleran, Leslie Feinberg, Achy Obejas, Essex Hemphill, Audre Lorde, Cheryl Dunye, and Alisson Bechdel. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M101D. Studies in Queer Literatures and Cultures. (5) (Same as Gender Studies M105D and Lesbian, Gay, Bisexual, Transgender, and Queer Studies M101D.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Enforced requisite: English Composition 3 or 3H. Introductory survey of African American literary life from late 1950s through 1970s. Topics include rise of Black Arts Movement of 1960s and 1970s, African American writing in early 1970s, with focus on authors such as Lorraine Hansberry, Amiri Baraka, Nikki Giovanni, Alice Walker, Toni Morrison, Ishmael Reed, Audre Lorde, Paule Marshall, and Margaret Walker. P/NP or letter grading.

M104. African American Literary Survey from Beginning to circa 1850. (5) (Same as African American Studies M104B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Enforced requisite: English Composition 3 or 3H. Introductory survey of African American literature from 1850 to 1940, including oral and written forms (folktales, spirituals, sermons, fiction, poetry, essays), by authors such as Phillis Wheatley, Frances Harper, Frederick Douglass, Harriet Jacobs, Charles Chesnutt, Booker T. Washington, and Pauline Hopkins. P/NP or letter grading.

M104B. African American Literature from Harlem Renaissance to 1960s. (5) (Same as African American Studies M104B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. A survey of 20th-century African American literature from New Negro Movement of post-WWII World War I period to 1960s (Blues, spirituals, speeches) and fiction, poetry, and essays by authors such as Jean Toomer, Claude McKay, Langston Hughes, Nella Larsen, Zora Neale Hurston, Richard Wright, Anna Deavere Smith, June Jordan, and Rita Dove. P/NP or letter grading.

M104C. African American Literary Survey of 1950s and 1970s. (5) (Same as African American Studies M104C.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Examination of African American literary life from late 1950s through 1970s. Includes the rise of Black Arts Movement of 1960s and 1970s, African American writing in early 1970s, with focus on authors such as Lorraine Hansberry, Amiri Baraka, Nikki Giovanni, Alice Walker, Toni Morrison, Ishmael Reed, Audre Lorde, Paule Marshall, and Margaret Walker. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M104D. Contemporary African American Literature. (5) (Same as African American Studies M104D.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. A survey of African American literature from 1980s to present covering range of genres, with emphasis on diversity of perspectives and styles that have emerged over past 30 years. Authors may include Toni Morrison, August Wilson, Octavia Butler, Anna Deavere Smith, June Jordan, Charles Johnson, and Maxine Hong Kingston. P/NP or letter grading.

M105A. Early Chicana/Chicano Literature, 1400 to 1920. (5) (Same as Chicana and Chicano Studies M105A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of post-1860 Chicana/Chicano literature that explores key literary and critical issues, such as race and geography, aesthetics and activism, cultural work and immigrant labor, kinship and sexuality, myth and meaning, and meat versus rice, in study of novels, poetry, performance, memoirs, and essays. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M105B. Chicana/Chicano Literature from Mexican Revolution to Mexican War. 1910 to 1920. (5) (Same as Chicana and Chicano Studies M105B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. A survey of Chicana/Chicano literature from poetry of Triple Alliance and Aztec Empire through end of Mexican Revolution (1920), including oral and written forms (poetry, corridos, testimonios, folktales, essays, plays) by writers such as Nazahualcoyotl (Hungry Coyote), Cabaaza de Vaca, Lorenzo de Zavala, Maria Amparo Ruiz de Burton, Eusebio Chacin, Daniel Venegas, and Loreda Villagrez de Magalhaes. P/NP or letter grading.

M105C. Chicana/Chicano Literature since el Movimiento, 1970s to Present. (5) (Same as Chicana and Chicano Studies M105C.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. A survey of Chicana/Chicano literature since 1970s. May focus on how queer and feminist activism as well as Central and South American migration have shaped 21st-century chicana/o. Oral, written, and graphic fiction, performance, and drama by writers such as Nely Garcia, Gloria Anzaldua, Los Bros Hernandez, Ana Castillo, and Dagoberto Gilb guide exploration of queer and feminist studies, Reagan generation, immigration debates, and emerging Latinx/Latino majority. P/NP or letter grading.

M105D. Introduction to Latina/Latino Literature. (5) (Same as Chicana and Chicano Studies M105D.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of U.S. Latina/Latino literature and introduction to its major critical trends, with emphasis on groups of Caribbean, Mexican, South American, and Central American origins. Representative works in relation to such topics as relationship between Latina/Latina populations and U.S. cultural sphere, struggles for self-determination, experiences of exile and migration, border zones, enclaves and languages, and mestizaje and its impact on cultural production. P/NP or letter grading.

M105E. Studies in Chicana/Chicana and/or Latina/Latina Literature. (5) (Same as Chicana and Chicano Studies M105E.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Variable topics course to give students broad introduction to issues and themes in Chicana/Chicana and/or Latina/Latina literature. Topics include border, immigration, revolution, language, gender, sexuality, and diaspora, among others, and may be repeated for credit with topic or instructor change. P/NP or letter grading.

M105SL. Seminar: Chicana/Chicana and/or Latina/Latina Literature—Service Learning. (5) (Same as Chicana and Chicano Studies M105SL.) Lecture, service, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Specialized studies in Chicanx/Latinx communities of Southern California, including Chicana/Chicana visions of Los Angeles; immigration, migration, and exile; autobiography and Chicana/Latina autobiography; Chicano journalism; and labor and literature. Service learning component includes minimum of 20 hours of meaningful work with agency involved with Chicana/Chicana and/or Latinx/Latina community and selected by instructor. P/NP or letter grading.

106. Studies in Native American and Indigenous Literatures. (5) (Same as American Studies M106B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Study of Native American and/or transnational indigenous literary and cultural expression. Topics may include oral traditions and histories, decolonization and sovereignty, identity and place in comparative perspectives, and multiple genres and forms such as novel, poetry, drama, visual arts, dance, song, and film. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M107A. Studies in Women's Writing. (5) (Same as Gender Studies M107A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Focus on women writers that may include historical, regional, national, and international emphasis, with possible topics such as authorship, self-writing, sexuality, gender, and genre. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M107B. Studies in Gender and Sexuality. (5) (Same as Gender Studies M107B and Lesbian, Gay, Bisexual, Transgender, and Queer Studies M107B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3, Examination of literary and cultural production through lens of gender and sexuality. Depending on instructor,
emphasis may be historical, regional, national, comparative, or thematic and include other intersectional vectors of identity and representation such as race and ethnicity. May be repeated for credit with topic or instructor change. P/NP or letter grading.

108. Interpersonal Encounters. (5) Lecture, four hours; discussion (when scheduled). Enforced requisites: English Composition 3 or 3H. Study of literary, cultural, and/or cinematic texts produced by people from different ethnic and religious backgrounds and provided reading groups for critical cultural perspectives on living in multietnic societies. May be repeated for credit with topic or instructor change. P/NP or letter grading.

109. Topics in Race, Ethnicity, Gender, and Sexual-ity Studies. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Consult Schedule of Classes for approved topics. May be repeated for credit with particular topic, genre, or subject to be studied in specific term. Depending on instructor, emphasis may be historical, regional, national, comparative, or thematic. May be repeated for credit with topic or instructor change. P/NP or letter grading.

110A. Writing in English Major: Analytical. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 4W (or 4HW), 10A, 10B, 10C, English Composition 3. Open only to English majors for credit to students in English for credit for course 110T. Improvement and refinement of writing about literature. Focus on writing as process, rewriting, and argument; minimum 15 to 20 pages of writing required. May not be repeated for credit. P/NP or letter grading.

110B. Writing in English Major: Adjunct. (2) Seminar, two hours. Students must be concurrently enrolled in an affiliated English lecture course (consult Schedule of Courses for classes so designated). Improvement and refinement of writing about literature. Brings together students enrolled in basic American Literature and Culture or English courses in workshop setting to develop coherent discipline-specific writing skills, especially art of developing literary critical analysis and argument. May be repeated for credit with topic or instructor or lecture course change. P/NP or letter grading.

110C. Topics in Biblical Literature. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Recommended: course 111A or 111B. Study of topics in Hebrew Bible and/or New Testament, with attention to particular religious, ethical, and theological implications of biblical narratives and/or modes of interpretation. Discussion of influence of Bible on discrete periods or individual authors in literatures in English. May be repeated for credit with topic or instructor change. P/NP or letter grading.

112A. Oral Tradition. (5) Lecture, four hours; dis-cussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Study of myth, dramatic origins, oral epic, folktales, and ballad. P/NP or letter grading.

112B. Celtic Mythology. (5) Lecture, four hours; dis-cussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of early textual materials pertaining to Celtic peoples and their stories, with emphasis on techniques of mythological analysis. P/NP or letter grading.

112C. Survey of Medieval Celtic Literature. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Knowledge of Irish or Welsh not required. General course dealing with Celtic literature from earliest times to 14th century. P/NP or letter grading.

112D. Celtic Folklore. (5) Lecture, four hours; dis- cussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Folkloric traditions of modern Ireland, Scotland, and other Celtic countries, with attention to historical and postcolonial issues and folklore methods. P/NP or letter grading.

112E. Food and Fantasy in Irish Tradition and Lit-erature. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Focus on food, cooking, feeding, eating, and drinking as powerful cultural symbols in Irish oral and literary tradition from medieval to modern times. P/NP or letter grading.

113A. History of English Language. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Study directed toward English majors of main features in grammatical, lexical, and phonetic condition of English language from Indo-European time to present. P/NP or letter grading.

113B. Introduction to Structure of Present-Day En-glish. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Study of the techniques of linguistic description as applied to pronunciation, grammar, and vocabulary of modern English. P/NP or letter grading.

114. Lyric Histories. (5) Lecture, four hours; dis-cussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Exploration of lyric poetry in English across centuries. Topics may include historical evolution of aesthetic forms, changing conceptions of dramatic personae, matter of literary influence, and complex relationship of individual lyric speakers with their social and historical contexts. May be repeated for credit with topic or instructor change. P/NP or letter grading.

115A. American Popular Literature. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Examination of such popular styles and genres as sentimental literature, sensation fiction, dime novels, crime stories, pornography, science fiction, supernatural tales, Hollywood novels, and other kinds of mass literary expression. P/NP or letter grading.

115B. British Popular Literature. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Readings in literature of British masses, from 16th-century broadsides to contemporary novels. Examination of social and cultural aspects of literature. P/NP or letter grading.

115C. Literature for Children and Adolescents. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Study of historical backgrounds and development of types of children’s literature, folklore and oral tradition, criticism, illustration, and bibliography and/or analysis and evaluation of literature intended mainly for students in junior and senior high schools. P/NP or letter grading.

115D. Detective Fiction. (5) Lecture, four hours; discus-sion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Study of British and American detective fiction and literature of detection. P/NP or letter grading.

116A. Experimental Fiction. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Overview of literatures involving digital technology, such as hypertext fiction, interactive fiction, animated and interactive poetry, multimedia works, video game narrative, and works employing network protocols and print-based text such as binding and book design. Focus generally on texts from 20th century and later, but can include readings dating to beginning of novel. May be repeated for credit with topic or instructor change. P/NP or letter grading.

116B. Introduction to Electronic Literature. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Exploration of literature in digital form, including web novels and short stories that employ playful or experimental practices in narrative, language, hybridity (genre, medium), typography, and the effects of text such as binding and book design. Basic introduction to new media theory. P/NP or letter grading.

117. Literature of California and American West. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Overview of literatures involving digital technology, such as hypertext fiction, interactive fiction, animated and interactive poetry, multimedia works, and short stories that employ playful or experimental practices in narrative, language, hybridity (genre, medium), typography, and the effects of text such as binding and book design. Basic introduction to new media theory. P/NP or letter grading.

117A. Community-Based Studies of Popular Literature. (5) Same as Civic Engagement M110SL). Lecture, four hours; discussion, one hour (when scheduled); fieldwork, two hours. Enforced requisite: English Composition 3 or 3H. Service-learning course that examines history and development of one or more genres of popular literature, with attention to contemporary communities of readers and writers and formation of civil society. Topics vary and may include children’s literature and childhood literacy, mass market fiction and book club culture, or science fiction and science policy. Service-learning component includes ongoing community-building interactions selected in advance by instructor. May be repeated for credit with topic change. P/NP or letter grading.

117B. Literature and Other Arts. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Overview of literatures involving digital technology, such as hypertext fiction, interactive fiction, animated and interactive poetry, multimedia works, video game narrative, and works employing network protocols and print-based text such as binding and book design. Focus generally on texts from 20th century and later, but can include readings dating to beginning of novel. May be repeated for credit with topic or instructor change. P/NP or letter grading.

117C. Studies in Visual Culture. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Study of visual images (photography, painting, sculpture and other plastic arts, performance art, dance, architecture). Topics vary and may include not only English literature but foreign literature in translation. May be repeated for credit with topic or instructor change. P/NP or letter grading.

118B. Literature and Other Arts. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Overview of literatures involving digital technology, such as hypertext fiction, interactive fiction, animated and interactive poetry, multimedia works, video game narrative, and works employing network protocols and print-based text such as binding and book design. Focus generally on texts from 20th century and later, but can include readings dating to beginning of novel. May be repeated for credit with topic or instructor change. P/NP or letter grading.
image and culture, film and visual culture. May be repeated for credit with topic or instructor change. P/NP or letter grading.

118E. Literature and Environment. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: English Composition 3. Introduction to interdisciplinary field of food studies, with focus on how literature, art, science writing, and visual culture address political dimensions of food and agriculture in specific contexts. P/NP or letter grading.

119 Literary Cities. (5) Lecture, four hours: discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Exploration of place of literary imagination in making of cities, with focus on questions of cultural exchange, development, migration, urban rebellion, and style. Topics may include meaning of urban space and time, city as urban village or cosmopolitan hub, segregated dystopia or postmodern future, and impact of exile, tourism, and migration in making of cities. Service learning component includes meaningful work with local nonprofit organizations selected in advance by instructor. May be repeated for credit with topic or instructor change. P/NP or letter grading.

120. History of Aesthetics and Critical Theory. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Investigation of key concepts and modes of performance, culture, and/ or media, broadly construed. Evaluation of different theories of subaltern, orientalist, feminist, and/or indigenous representation and histories. May be repeated for credit with topic or instructor change. P/NP or letter grading.

121. Modern and Contemporary Aesthetics and Critical Theory. (5) Lecture, four hours; discussion; one hour (when scheduled). Enforced requisite: courses 10A, 10B, 10C. Investigation of some dominant trends in 19th- and 20th-century aesthetics, critical theory, and interpretation. Topics may include Marxism, psychoanalysis, structuralism, poststructuralism, feminism, and postcolonialism. May not be repeated for credit. P/NP or letter grading.

122. Keywords in Theory. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Recommended: courses 120, 121. Taking its model from Raymond Williams’ classic vocabulary of culture and society, investigation of fundamental theoretical concepts, or keywords, that have emerged from and influenced key intellectual disciplines to shape literary and cultural studies. Consideration of lexical development of such keywords; how they alter and enrich assumptions about textuality, art, science writing, and visual culture. May be repeated for credit with topic or instructor change. P/NP or letter grading.

123. Theories of History and Historicism. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Recommended: courses 120, 121. Exploration of theories of history and historicism that offer productive approaches to literary study. Emphasis on construction of theories of history. New approaches to narrative and representation of time. May be repeated for credit with topic or instructor change. P/NP or letter grading.

124. Theories of Religion. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Recommended: courses 120, 121. Examination of relationship between literary and religious practices and traditions. Topics may include legacies of monotheisms, theories of sacrifice, sacrament, gift, and mystical traditions, as well as history of allegory and theological approaches to reading. Selected topics may address literary applications of religious categories as treated in cultural anthropological and critical theory. May be repeated for credit with topic or instructor change. P/NP or letter grading.

125. Violence in Cultural Theory and Literature. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Recommended: courses 120, 121. Examination of literary, philosophical, religious, and/or psychological texts that theorize causes, effects, political justifications, cultural and literary uses and critiques of violence. P/NP or letter grading.

126. Feminist and Queer Theory. (5) Same as Gender Studies M126 and Lesbian, Gay, Bisexual, Transgender, and Queer Studies M126/Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3. Recommended: one course from 120, 121, Gender Studies 102, 103, or 104. Investigation of key concepts and debates in study of gender, sexuality, and kinship, with focus on their interrelated significance for making of culture. Readings to be interdisciplinary, with possible emphasis on impact of changing ideas of gender and sexuality on specific historical cultures. May be repeated for credit with topic or instructor change. P/NP or letter grading.

127. Performance, Media, and Cultural Theory. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Recommended: courses 120, 121. Examination of concepts and modes of performance, culture, and/or media, broadly construed. Evaluation of different modes of inquiry around one or more of these concepts, as well as their intersection, in various intellectual traditions, including fields of cultural studies, performance studies, literary analysis, and film theory. May be repeated for credit with topic or instructor change. P/NP or letter grading.

128. Postcolonial and Transnational. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Recommended: courses 130, 131. Exploration of methodological, aesthetic, and theoretical implications of postcolonial and transnational approaches to study of literature and culture. Topics may include theories of subaltern, orientalist, feminist, and/or indigenous representation and histories and may address representational issues of national sovereignty in wake of globalization. May be repeated for credit with topic or instructor change. P/NP or letter grading.

129. Topics in Genre Studies, Interdisciplinary Studies, and Critical Theory. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Recommended: courses 120, 121. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. Depending on instructor, emphasis may be historical, regional, national, comparative, or thematic. May be repeated for credit with topic or instructor change. P/NP or letter grading.

130. Introduction to Postcolonial Literatures. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Introduction to major themes and issues in postcolonial literature, with focus on contemporary literature and writings produced after decolonization, often emphasizing history of British or other empires with emphases on African, Caribbean, and indigenous Pacific. May not be repeated for credit. P/NP or letter grading.

131. Studies in Postcolonial Literatures. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Strongly recommended: course 130. Survey of how colonialism and decolonization have shaped literary and cultural expressions, with specific emphasis on regional or thematic concerns. Topics may include literatures of Africa and African diaspora, environment and empire, Caribbean contact zones, or literatures of indigenous Pacific. May be repeated for credit with topic or instructor change. P/NP or letter grading.

132. Culture and Imperialism. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Exploration of relationship between culture and politics as treated in lens of literary texts to raise questions about what study of empire tells us about relationship to power and knowledge. Discussion of shifting patterns and paradigms of imperial rule, including literary uses of colonial and postcolonial and peripheral or colonial spaces were transformed. Emphasis may be on particular historical period or may adopt thematic approach, such as Orientalism. Topics may include construction of gender race, otherness, nature, religion, and nation. May be repeated for credit with topic or instructor change. P/NP or letter grading.

133. Transnational Literatures and Cultures. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of literatures of Atlantic to examine cultural, political, and ideological issues that followed from transatlantic movement of people, ideas, commodities, and cultural artifacts. In addition to literatures of Britain and U.S., coverage may include texts from Africa, Caribbean, Mexico, South America, Spain, and other parts of Europe. May be repeated for credit with topic or instructor change. P/NP or letter grading.

134. Nationalism and Transnationalism. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Examination of how critical frameworks of nation and migration, transnationalization and globalization, and contemporary politics and modernity frame analysis of literary texts, particularly relationship between literature and national identity. Other topics include nation building in relationship to regional identities as well as courses of national expansion, diaspora, resettlement, and exile and foundational narratives of nation in relationship to representations of mobility. Genres may include epic, romance, travel narrative, novel, and autobiography. May be repeated for credit with topic or instructor change. P/NP or letter grading.

135. Literature of Americas. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of literatures of Americas, with emphasis on complex ways in which letters of North America, Central America, South America, and Caribbean forge distinct American perspective. Enforced requisites: 1, 1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H, 1I, 1J, 1K, 1L, 1M, 1N, 1O, 1P, 1Q, 1R, 1S, 1T, 1U, 1V, 1W, 1X, 1Y, 1Z. May be repeated for credit with topic or instructor change. P/NP or letter grading.

136. Creative Writing: Poetry. (5) Seminar, three or four hours. Enforced requisites: English Composition 3 or 3H, English 4W or 4HW. Weekly exercises in
writing of poetry, with practice in standard forms and meters and study of techniques. Classroom discussion based on student work. Enrollment in more than one section per term not permitted. May be repeated for maximum of 15 units. No more than 10 units may be completed with same instructor. P/NP or letter grading.

137. Creative Writing: Short Story. (5) Seminar, three or four hours. Enforced requisites: English Composition 3 or 3H, English 4W or 4W. Three average-length stories each term. Specialized study of work of one single Anglophone poet, dramatist, prose writer, or novelist. May be repeated for credit with topic or instructor change. P/NP or letter grading.

140A. Chaucer: Canterbury Tales. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Introductory study of Chaucer's language, versification, and historical and literary background, including analysis and discussion of his long major poem, Canterbury Tales. P/NP or letter grading.

140B. Chaucer: Troilus and Criseyde and Selected Minor Works. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Intensive study of Troilus and Criseyde and selected minor works of Chaucer, such as Book of the Duchess, House of Fame, Parliament of Fowls, etc. P/NP or letter grading.

141. Early Medieval Literature. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Major poetry and prose of early medieval Britain, including epic, romance, history, saints' lives, and travel literature. Substantial research component included. May be repeated for credit with topic or instructor change. P/NP or letter grading.

142. Later Medieval Literature. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Reading and historical exposition of major writers of later medieval Britain (e.g., Gawain-poet, Langland, Gower, Margery Kempe, Malory, miracle and morality plays, prose, and lyric). P/NP or letter grading.

142B. Later Medieval Literature: Research Component. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Reading and historical exposition of major writers of later medieval Britain (e.g., Gawain-poet, Langland, Gower, Margery Kempe, Malory, miracle and morality plays, prose, and lyric). P/NP or letter grading.

143. Drama to 1576. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. English drama from its Latin and Anglo-Norman roots to opening of first public playhouse. P/NP or letter grading.

144. Medieval Renaissance: Literature of the Court. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Investigation of medieval court culture, exploring concepts of nobility, governance, love, loyalty, and power in works from epic to lyric, verse, and prose, and satire. Texts may include Beowulf, Lais of Marie de France, Sir Gawain and Green Knight, Pearl, and Malory's Morte Arthur. May be repeated for credit with topic or instructor change. P/NP or letter grading.

145. Medieval Literatures of Devotion and Dissent. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Exploration of devotional genres and their complex relationships with traditions of dissent in medieval English culture, encompassing hagiography, vision, conversion narratives, interreligious debate, heresy trials, and Lollard manifestos and translations. Texts may include Dream of Rood, South English Legendary, Ancrenne Wisse, Piers Plowman, Lollard writings, macroplastics and microplastics of Julian of Norwich, and Book of Margery Kempe. May be repeated for credit with topic or instructor change. P/NP or letter grading.

146. Medieval Story Cycles and Collections. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Exploration of medieval story cycles and story collections as narrative forms. Medieval story cycles engage in complex literary conversations across medieval cultures, periods, genres, and languages, while story collections often stage art of storytelling within narrative frame to invite self-consciousness about powers of literature. Texts may include cycles such as texts gathered as Matter of Britain, Matter of Rome, or Matter of France; also Mabingerining, manuscript collections such as Auchenhein manuscript, the Matter of France, and the Matter of Britain. May be repeated for credit with topic or instructor change. P/NP or letter grading.

147. Medieval Histories, Chronicles, and Records. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Investigation of medieval history as part of medieval literary tradition. Medieval histories survive in every language of medieval Britain, including Latin, Old English, Welsh, Irish, Anglo-Norman French, and Middle English. Multilingual manuscripts point to pressures of history on history writing—histories are always shaped by political, cultural, linguistic, and textual pressures of present tense. Texts may include histories, chronicles, material records, and historiographically engaged texts. May be repeated for credit with topic or instructor change. P/NP or letter grading.

148. Cultures of Middle Ages. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: course. An interdisciplinary survey of particular medieval societies, with special emphasis on complex interactions between different ethnic and cultural traditions of medieval world. Examination of processes of cultural transmission: classical or patrionic traditions into medieval culture, crusade, travel literature, and literature of contact zones, including interactions between Celtic, Anglo, and Norman societies, and debates between Pagans, Jews, Christians, and Muslims. May be repeated for credit with topic or instructor change. P/NP or letter grading.

149. Medievalisms. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Exploration of postmedieval production of Middle Ages as period for scholarly study, tactical premoderneon to modern and contemporar, and as context for medieval studies and its links to nationalism, notable medievalists and their work, and uses of Middle Ages in popular culture from Umberto Eco to Tolkien, Robin Hood, Arthur, and Merlin. May be repeated for credit with topic or instructor change. P/NP or letter grading.

150A. Shakespeare: Poems and Early Plays. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Intensive study of selected poems and representative comedies, histories, and tragedies through Hamlet. P/NP or letter grading.

150B. Shakespeare: Later Plays. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Examination of representative problem plays, major tragedies, Roman plays, and romances. P/NP or letter grading.

150C. Topics in Shakespeare. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Study of major works of Milton, with emphasis on Paradise Lost. P/NP or letter grading.

151. Milton. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Study of major works in their cultural context. May be repeated for credit with topic or instructor change. P/NP or letter grading.

152. Literatures of English Renaissance and Early Modern Period. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Study of major works in their cultural context. May be repeated for credit with topic or instructor change. P/NP or letter grading.

153. Theatrical Renaissance: Early Modern Texts and Performances. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Topics may include professional and amateur performances in court, cities, churches, and countryside of varied sorts of texts—masques, religious drama, secular drama, charivari—alongside examination of texts, performances, and performance spaces from 1500 to 1642. May be repeated for credit with topic or instructor change. P/NP or letter grading.

154. Renaissance Worlds. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Variable topics, including travel literature, exploration and expansion, transnational and transoceanic texts, science and cosmography, conceptual worlds of myth and philosophy, as expressed in literature and other arts. May be repeated for credit with topic or instructor change. P/NP or letter grading.

155. Renaissance Subjects. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Literary representations of personhood in early modern period, with attention to issues such as personal voice, relations of privacy/community, bodies/souls, selves/others, as impacted by quotients such as gender, sexuality, race, and ethnicity as they are understood in period from 1500 to 1700. May be repeated for credit with topic or instructor change. P/NP or letter grading.

156. Devotion and Dissent. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Examination of religious thought and practice associated with Reformation and Counter-Reformation enterprises in early modern period and consideration of how various types of writing—poems, prayer books, sermons, historical chronicles, polemical essays, travel narratives, trial records—reflect and assess religious ferment of era. Coverage of either broad historical range such as from Henry VIII’s break with Rome to execution of Charles I or one specific period such as variance in the art of conversion, or conversion narratives. May be repeated for credit with topic or instructor change. P/NP or letter grading.

157. Translation and Innovation in English Renais-
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works of English Renaissance literature and culture in relation to literatures of antiquity and continental Re-
naissance. Topics may include epic tradition, forerun-
ers of novel, Renaissance humanisms, literature of
love, monsters and marvels, representing nature, Ovidian transformations. May be repeated for
credit with topic or instructor change. P/NP or letter
grading.

159. Topics in Literature, circa 1500 to 1700. (5) Lecture,
four hours; discussion, one hour (when scheduled).
Enforced requisites: courses 10A, 10B. Study of literatures from this time period and conventions of literary research.
Substan-
tial research component included. Consult Schedule of Classes for subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter
grading.

160A. Literature of Restoration and Earlier 18th Century. (5) Lecture, four hours; discussion, one hour (when
scheduled). Enforced requisites: courses 10A, 10B. Study of major works as literary documents and as products of Restoration and earlier 18th-century thought. P/NP or letter grading.

160B. Literature of Later 18th Century. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Study of major works as literary documents and as products of later 18th-century thought. P/NP or letter grading.

161A. Poetry in English to 1850. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Consideration of poetry across genres and throughout period. Topics may include literary and cultural forms including Pica-
daric ode, mock-epic, and verse-epistle, questions of literary imitation and originality, poetry's relationship to empire, and gendering of authorship. May be repeated for credit with topic or instructor change. P/NP or letter grading.

161B. Drama in English to 1850. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Survey of drama in English. Consideration of literary forms and of the critical concepts of race and nation, and ways imperial cul-
ture and in sites of contact and conquest over-
170A. American Literature, 1685 to 1900. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Historical survey of American literature from end of Civil War to beginning of 20th century, including writers such as James, Twain, Norris, Dickinson, Crane, Chesnutt, Gilman, and others working in modes of realist and naturalist novel, regional and vernacular prose, and poetry. P/NP or letter grading.

170B. American Literature, 1900 to 1945. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Historical survey of American literature from turn of century to end of World War II. P/NP or letter grading.

170C. American Literature since 1945. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Historical survey of American literature since end of World War II. P/NP or letter grading.

171A. Later 19th-Century Poetry. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Development of English poetic genres in relation to significant movements in the arts: aestheticism, decadence, feminism, and imperialism from middle decades of 19th century to turn of 20th century. P/NP or letter grading.

174B. American Fiction since 1945. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of American novels and short stories since end of World War II. P/NP or letter grading.

174C. Contemporary American Fiction. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of American novels and short stories, mostly by living authors, with emphasis on emergent issues and aesthetic concerns. May be repeated for credit with topic or instructor change. P/NP or letter grading.

174D. American Nonfictional Prose. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of American nonfictional prose (essays, autobiographies, travel narratives, and other). Particular genre and/or historical period vary with instructor. May be repeated for credit with topic or instructor change. P/NP or letter grading.

176. Hemispheric American Literature. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Examination of primarily North American literature from hemispheric rather than nation-based perspective. Historic breadth in study of American literature while posing such crucial theoretical issues as emergence of U.S. Empire or relationship between North America and global south, including Africa, Latin America, and Caribbean. May be repeated for credit with topic or instructor change. P/NP or letter grading.

177. Interdisciplinary Studies of American Culture. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Survey of major British novelists and short story writers from 1800 to present. P/NP or letter grading.

178. American Literature and Culture. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of American literature and culture from its beginning to present day. Historical breadth in study of American literature while posing such crucial theoretical issues as emergence of U.S. Empire or relationship between North America and global south, including Africa, Latin America, and Caribbean. May be repeated for credit with topic or instructor change. P/NP or letter grading.

179. American Nonfictional Prose. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of American nonfictional prose (essays, autobiographies, travel narratives, and other). Particular genre and/or historical period vary with instructor. May be repeated for credit with topic or instructor change. P/NP or letter grading.

180. Topics in Literature and Language. (5) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

181D. Topics in Interdisciplinary Studies. (5) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

182B. Topics in Renaissance and Early Modern Literature. (5) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

182D. Topics in 20th- and 21st-Century Literature. (5) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

182E. Topics in 19th-Century Literature. (5) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

183A. Topics in Colonial American Literature. (5) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

183B. Topics in 19th-Century American Literature. (5) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

184. Capstone Seminar: English. (5) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C, and completion of a level 300-level English course required for major. Limited to senior English or American Literature majors. Students use knowledge from prior coursework to address current topics in discipline and with faculty members on focused topic of research. CULMINATING PAPER OR COURSE PROJECT REQUIRED.
project and class presentation required. May be repeated for credit with topic or instructor change. Letter grading.

190H. Honors Research Colloquia in English. (1) Seminar, one hour. Enforced corequisite: course 198A or 198B. Designed to bring together students under- taking supervised research project for departmental honors in seminar setting with one or more faculty members to discuss their own work in progress and critically review related honors projects. Limited to one supervising faculty member. May be repeated for credit. P/NP grading.

M191A. Topics in African American Literature. (Same as African American Studies M179A.) Seminar, three or four hours. Enforced requisite: English Composition 3 or 3H. Variable specialized studies course in African American literature. Topics may include Harlem renaissance, African American literature in the South, Black women’s writing, contemporary African American fiction, African American poetry. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M191B. Topics in Chicana/Chicano and/or Latina/Latino Literatures. (Same as Chicana and Chicano Studies M139.) Seminar, three or four hours. Enforced requisite: English Composition 3 or 3H. Variable specialized studies course in Chicana/Chicano and/or Latina/Latino literature and culture; specific nationalities within Asian American community; themes of transnational migration; cross-cultural, interdisciplinary, or interracia negotiation; and gender and queer politics. Reading, discussion, and development of culminating project. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M191C. Topics in Asian American Literature. (Same as Asian American Studies M191C.) Seminar, three or four hours. Enforced requisite: English Composition 3 or 3H. Variable specialized studies course in Asian American literature. Topics may include gender (as gendered representation, family, the body), religion, and sexuality (as Gender Studies M191E and Lesbian, Gay, Bisexual, Transgender, and Queer Studies M191D.) Seminar, three or four hours. Enforced requisite: English Composition 3. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M191D. Topics in Queer Literatures and Cultures. (Same as Gender Studies M191D and Lesbian, Gay, Bisexual, Transgender, and Queer Studies M191D.) Seminar, three or four hours. Enforced requisite: English Composition 3. Consult Schedule of Classes for author, period, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M191E. Topics in Gender and Sexuality. (Same as Gender Studies M191E and Lesbian, Gay, Sexual, Transgender, and Queer Studies M191E.) Seminar, three or four hours. Enforced requisite: English Composition 3. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

191H. Honors Research Seminars: English. (5) Seminar, three hours. Enforced requisite: one course from 120 through 128. Open only to students who are eligible for seminars in English. Introduction to research techniques and study of various approaches and applications of critical methodology as it relates to interpretation and evaluation of texts. Development and presentation of proposals for honors projects. Consult undergraduate adviser. May be repeated for credit. P/NP or letter grading.

M192. Undergraduate Practicum in English: Journals. (2) (Formerly numbered 192.) (Same as English Composition M192 and Environment M192.) Seminar, two hours. Training and supervised practicum for undergraduates studying campus journals supervised by faculty members in English, Institute of the Environment and Sustainability, and/or Writing Programs. May be repeated for credit. P/NP or letter grading.

193. Colloquia and Speakers’ Series Undergradu ate Seminars: English. (1) Seminar, one hour. Limited to undergraduate students. Discussion of current critical literature and/or creative readings by writers, artists, and scholars. Exploration in greater depth of literary topics and creative work presented through sponsored forums, speakers’ series, and colloquia. May be repeated for credit. P/NP grading.

195CE. Community and Corporate Internships in English. (1) Seminar, one hour. Limited to seniors/juniors. Internship in corporate, governmental, or nonprofit setting coordinated through Center for Community Learning. Students complete written assignment and attend biweekly meetings with graduate student coordinator, and write final research paper. Faculty sponsor and graduate student coordinator construct series of reading assignments that examine issues related to internship site. May not be applied toward major requirements. May be repeated for credit with consent of Center for Community Learning. Individual contract with supervising faculty member required. P/NP or letter grading.

197. Individual Studies in English. (2 to 5) Tutorial, four hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty sponsor and student. Assignments and reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

198A-198B. Honors Research in English. (5-6) Tutorial, to be arranged. May be repeated once for credit with topic or instructor change. P/NP or letter grading.

199A-199B. Directed Research or Senior Project in English. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Development and completion of honors thesis under direct supervision of faculty member. May be repeated for credit. Individual contract required. P/NP or letter grading.


201A. Criticism and Interpretation from Classical Era to Renaissance. (4) Lecture, three hours. Examination of major texts in history of critical theory and interpretation from the classical era to the Renaissance. Descriptive, critical, and historical methods; including classical literary criticism (Ptolemy, Aristotle, Horace, Longinus), biblical hermeneutics (Biblical, Midrash, Talmud, Augustine, St. Thomas Aquinas), and medieval and Renaissance theories of interpretation (Dante, Boccaccio, Sidney). S/U or letter grading.

201B. Aesthetics and Criticism from Enlightenment to Decadence. (4) Lecture, three hours. Continuation of course 201A, proceeding from neoclassical and Enlightenment critical theory through Victorian and decadent aesthetic and literary criticism. Readings may include texts by Rousseau, Dryden, Pope, Hume, Kant, Schiller, the Schlegels, Coleridge, Hegel, Schelling, Arnold, Pater, Wilde, and Nietzsche. S/U or letter grading.

201C. Developments and Issues in Modern Critical Thought. (4) Lecture, three hours. Study of major figures and ideas in modern and contemporary critical theory. Readings vary from year to year but may include such figures as Freud, Durkheim, Saussure, Heidegger, Shklovskii, Benjamin, Adorno, Levi-Strauss, Lacan, Barthes, Derrida, Danto, Cixous, Fanon, Foucault, Irigaray, Lyotard, Bourdieu, and Bhabha. S/U or letter grading.


204. History of Rhetoric. (4) Lecture, four hours. Reading of basic texts in history of rhetoric and selections from standard commentaries. Survey of classical and medieval to modern period in alternate years. S/U or letter grading.

M191A. Study of Oral Traditions and History and Methods. (4) (Same as Scandinavian M271.) Seminar, three hours. Exploration of scholarly and literary attempts to study, define, analyze, promote, and/or appreciate oral traditions, from Homer and ancient Greece to origins of vernacular literatures, European and African-American oral traditions, and modern oral media and popular oral genres, such as storytelling and poetry. S/U or letter grading.

M205B. Collecting Oral Tradition. (4) (Same as Scandinavian M272.) Seminar, three hours. Description and evaluation of various modern approaches to collecting and documenting oral tradition as text, performance, and cultural artifact. Consideration of approaches ranging from written transcription and textualization to audio and video presentation. S/U or letter grading.

M205C. Studies in Oral Traditional Genres. (4) (Same as Scandinavian M273.) Seminar, three hours. Exploration in depth of variety and history of, and scholarship on, particular oral traditional genre (e.g., ballad, epic, proverb, riddle, folklore, legend) or set of closely related oral traditional genres. S/U or letter grading.


211. Old English. (4) Lecture, four hours. Study of Old English grammar, lexicon, phonology, and pronunciation to enable students to read literature silently and aloud. Reading of as much of more interesting Old English prose and poetry as can be read in one term. S/U or letter grading.

212. Middle English. (4) Lecture, four hours. Requisite: course 211. Detailed study of linguistic aspects of Middle English and of representative examples of better prose and poetry. S/U or letter grading.


215. Paleography of Latin and Vernacular Manuscripts, 900 to 1500. (4) (Same as Classics M218, French M210, and History M218.) Lecture, three hours; discussion, two hours. Introduction to history of Latin and vernacular manuscript book from 900 to 1500 to (1) train students to make informed judgments with regard to place and date of origin, (2) provide training in accurate reading and transcription of later medieval scripts, and (3) examine manuscript book as witness to changing function that produced it. Focus on relationship between Latin manuscripts and vernacular manuscripts with regard to their respective presentation of written texts. S/U or letter grading.


230. Seminar: Creative Writing. (2 to 4) Lecture, two to four hours. Preparation: submission of writing samples in specified genre (poetry, fiction, or drama). May be repeated but may not satisfy more than one of nine courses required for first qualifying examination nor any of five courses required for second qualifying examination. S/U or letter grading.

240. Studies in History of English Language. (4) Lecture, four hours. Individual seminars dealing with any single historical period from Old English period to present or development of one particular linguistic characteristic (phonology, syntax, semantics, dialectology) through various periods. May be repeated for credit. S/U or letter grading.

241. Studies in Structure of English Language. (4) Lecture, four hours. Topics in various aspects of structure of modern English, especially syntax and semantics. May be repeated for credit. S/U or letter grading.

242. Language and Literature. (4) Lecture, four hours. Application of linguistics to literary analysis. Individual seminars dealing with one historical period (medieval and Renaissance, neoclassical, or 19th century and modern) or specific authors, or contributions of specific groups of linguists to literary analysis. May be repeated for credit. S/U or letter grading.

244. Old and Medieval English Literature. (4) Lecture, four hours. Studies in poetry and prose of Old and medieval English literature; limits of investigation set by individual instructor. May be repeated for credit. S/U or letter grading.

246. Romance Literature. (4) Lecture, four hours. Studies in poetry and prose of Romance language literature, exclusive of Shakespeare; limits of investigation set by individual instructor. May be repeated for credit. S/U or letter grading.

247. Shakespeare. (4) Lecture, three hours. May be repeated for credit. S/U or letter grading.


250. Restoration and 18th-Century Literature. (4) Lecture, three hours. Studies in English poetry and prose, 1660 to 1800; limits of investigation set by individual instructor. May be repeated for credit. S/U or letter grading.

251. Romantic Writers. (4) Lecture, three hours. May be repeated for credit. S/U or letter grading.

252. Victorian Literature. (4) Lecture, three hours. Studies in poetry and prose of Victorian period; limits of investigation set by individual instructor. May be repeated for credit. S/U or letter grading.

253. Contemporary British Literature. (4) Lecture, three hours. May be repeated for credit. S/U or letter grading.


255. Contemporary American Literature. (4) Lecture, three hours. Studies in contemporary American poetry and prose; limits of investigation set by individual instructor. May be repeated for credit. S/U or letter grading.

256. Studies in Drama. (4) Lecture, three hours. Studies in drama as genre from its beginning to present; limits of investigation set by individual instructor. May be repeated for credit. S/U or letter grading.

257. Studies in Poetry. (4) Lecture, three hours. Studies in various genres and forms of poetry from Old English to present; limits of investigation set by individual instructor. May be repeated for credit. S/U or letter grading.

258. Studies in Novel. (4) Lecture, three hours. Studies in evolution of genre from its beginning to present; limits of investigation set by individual instructor. May be repeated for credit. S/U or letter grading.

259. Studies in Criticism. (4) Lecture, three hours. May be repeated for credit. S/U or letter grading.

260. Studies in Literature and Its Relationship to Arts and Sciences. (4) Lecture, three hours. Studies in interrelationships of literature, art, and sciences; limits of investigation set by individual instructor. May be repeated for credit. S/U or letter grading.

260A. Topics in Asian American Literature. (4) (Same as Asian American Studies M260A) Seminar, three hours. May be repeated for credit. S/U or letter grading.

261. Studies in Chicana/Chicana Literature. (4) (Formerly numbered 261.) (Same as Chicana and Chicano Studies M289B) Seminar, three hours. Intensive research and study of major themes, authors, and issues in Chicana/Chicana literature and culture. Examination of political, aesthetic, economic, and cultural context that emerges in Chicana/Chicana discourse; limits of investigation set by individual instructor. May be repeated for credit. S/U or letter grading.

262. Studies in Afro-American Literature. (4) (Same as African American Studies M200E) Lecture, four hours. In-depth study of major themes, issues, and writers in Afro-American literature. Discussions and research on aesthetic, cultural, and social backgrounds of Afro-American writing. May be repeated for credit. S/U or letter grading.

263. Celtic Literature. (4) Lecture, three hours. Preparation: knowledge of one ancient or modern Celtic language. Studies in poetry and prose of early and modern Celtic literatures, chiefly Irish and Welsh; limits of investigation set by individual instructor. May be repeated for credit. S/U or letter grading.

264. Studies in Rhetoric. (4) Lecture, three hours. Special topics in classical and modern rhetoric, including substantial practice in rhetorical analysis of literary texts. May be repeated for credit. S/U or letter grading.


266. Cultural World Views of Native America. (4) (Same as American Indian Studies M200B) Seminar, three hours. Exploration of written literary texts from oral cultures and other expressive cultural forms—dance, art, song, religious and medicinal ritual—in selected Native American societies, as these traditional and oral contexts have been translated into contemporary literary texts (fiction, poetry, essay, and drama). Survey, from secondary sources, of interdisciplinary methodological approaches taken from literary analysis, ethnography, anthropology, linguistics, and ethnomusicology. May be repeated for credit with instructor and/or topic change. Letter grading.

M270. Seminar: Literary Theory. (8) (Same as Comparative Literature M294.) Seminar, three hours. Advanced interdisciplinary seminar to explore philosophical, historical, and critical foundations of literary theory as well as current issues in literary and cultural studies. S/U or letter grading.
ENTREPRENEURSHIP

Interdisciplinary Minor
John E. Anderson Graduate School of Management
149 Humanities Building
Box 951390
Los Angeles, CA 90095-1530
310-825-1389
munguia@english.ucla.edu
http://www.uei.ucla.edu/entrepreneurship

Alfred E. Osborne, Jr., PhD, Chair

Faculty Committee
Andrew G. Atkeson, PhD (Economics)
Carla Hayn, PhD (Management)
Mark J. Garmaise, PhD (Management)
Richard B. Kaner, PhD (Chemistry and Biochemistry)
Alfred E. Osborne, Jr., PhD (Management)
James W. Stigler, PhD (Psychology)
Miguel M. Urueta, PhD (Management)
Willeke Z. Wendrich, PhD (Near Eastern Languages and Cultures)

Scope and Objectives

The Entrepreneurship minor introduces undergraduate students to the field of entrepreneurship. A key element of entrepreneurship is the concept of opportunity recognition where individuals or teams pursue business concepts without regard to immediate access to resources utilizing lean start-up principles. Faculty members from applied fields in the professional schools and industry collaborate with faculty from academic disciplines across the campus to provide a critical framework for questioning and connecting topics related to entrepreneurship.

Through a carefully developed core curriculum and an integrative capstone experience, students in the minor obtain both breadth and depth in understanding of the concepts, frameworks, and practical implications of entrepreneurship.

Undergraduate Study

Entrepreneurship Minor

To enter the Entrepreneurship minor, students must (1) have an overall grade-point average of 3.0 or better and (2) submit an application supporting their interest in pursuing the minor. Applications are accepted in fall, winter, and spring quarters. To help plan the course schedule and internship/fielxperience, students are expected to work closely with the academic advisor. Applications are available on the minor website.

Required Lower-Division Course (4 or 5 units):
Communication 1 or any Writing II course.

Required Upper-Division Courses (24 or 25 units): Management 160, 161, 199 (4 units minimum), and three elective courses selected from Ancient Near East M105, Communication 109, M117, 133, 156, Dance C184, Digital Humanities 101, 150, Economics 106E, 173A, 173B, Environment 163, Ethnomusicology 105, Management 162, 163, 164, 167, Sociology 172. At least two of the three elective courses must be selected from the management courses listed above.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 3.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

ENVIRONMENT AND SUSTAINABILITY, INSTITUTE OF THE
Center for Interdisciplinary Instruction
College of Letters and Science
300 La Kretz Hall
Box 951496
Los Angeles, CA 90095-1496
310-825-5008
https://ioes.ucla.edu

Peter M. Kareiva, PhD, Director

Professors
Richard F. Ambrose, PhD
Paul H. Barber, PhD
Daniel T. Blumstein, PhD
Ari E. Carlson, JD
Judith A. Carney, PhD
Yoram Cohen, PhD
Charles J. Corbett, PhD
Randall D. Crane, PhD
Magali A. Delmas, PhD
Elizabeth M. DeLoughrey, PhD
J.R. DeShazo, MSc, PhD
Rajit Gadh, PhD
Thomas W. Gillespie, PhD
Hilary A. Godwin, PhD
Malcolm S. Gordon, PhD
Patricia A. Gowaty, PhD
Alexander D. Hall, PhD
Susanna B. Hecht, PhD
Ursula K. Heise, PhD (Marcia H. Howard Term Professor of Literary Studies)
Stephen P. Hubbell, PhD
Diana L. Huffaker, PhD
Richard J. Jackson, MD, MPH
Jennifer A. Jay, PhD
Peter M. Kareiva, PhD
Dennis P. Lettenmaier, PhD
Glen M. MacDonald, PhD (John Muir Memorial Endowed Professor of Geography)
James C. McWilliams, PhD
Mary D. Nichols, JD, in Residence
Gregory S. Okin, PhD
Paul M. Ong, PhD
Edward A. Parson, MSc, PhD (Dean and Rae Emmett Endowed Professor of Environmental Law)
Suzanne E. Paulson, PhD
Stephanie S. Pincetl, PhD, in Residence
Michael L. Ross, PhD
Philip W. Rundel, PhD
H. Bradley Shaffer, PhD
Thomas B. Smith, PhD
Victoria L. Sork, PhD
Michael K. Stenstrom, PhD
Irwin H. Suffet, PhD
Blaine Van Valkenburgh, PhD
Robert K. Wayne, PhD
Yifang Zhu, PhD

Professors Emeriti
J. Nicholas Entriken, PhD

John R. Froines, PhD
William M. Hamner, PhD
David D. Jackson, PhD
Antony R. Orme, PhD
Keith D. Stoltenbach, PhD
Richard P. Turco, PhD
Richard R. Vance, PhD
Arthur M. Winer, PhD

Associate Professors
Allison B. Carruth, PhD
Aradhina K. Tripathi, PhD

Assistant Professors
Deepak Rajagopall, PhD
Robert Eagle Tripathi, PhD
Alex Wang, JD

Adjunct Professors
Mark A. Gold, DEnv
James R. Greenwood, PhD
Lawrence W. Harding, PhD
Robert J. Lempert, PhD
Carl A. Maida, PhD
Michael J. McGuire, PhD
Sasan S. Saatchi, PhD

Adjunct Associate Professor
Travis R. Longcore, PhD
Rebecca F. Shipé, PhD

Adjunct Assistant Professors
Wolfgang Buermann, PhD
Jon A. Christensen, PhD
Ryan J. Harrigan, PhD
Kevin Y. Njio, PhD
Kristen C. Ruegg, PhD
Xavier Swaminathan, DEnv

Scope and Objectives

The mission of the UCLA Institute of the Environment and Sustainability (IoES) is to advance cross-disciplinary research, teaching, and public service on matters of critical importance to the planet and the campus community. The environment is defined broadly to include the interrelated issues of global climate change, loss of biological diversity, and threats to human health and well-being from the use and misuse of natural resources, applying all the tools of scientific and policy analysis as well as moral and aesthetic values to the work. The environment is a crucial component of sustainability, which is defined as the simultaneous consideration of environmental, economic, and social concerns. Los Angeles itself is a vital asset to this mission. As an international megalopolis located in one of the world’s most biologically diverse regions, Los Angeles is a magnet for scholars from around the world who are facing similar issues of pollution, access to potable water, demand for energy, fragmentation of habitat, and the need to restore ecological function to sprawling urban settlements in a manner that supports economic growth and that is socially just and equitable.

The IoES offers creative, multidisciplinary academic programs and courses that address the full complexity of current environmental problems and sustainable solutions. The Bachelor of Science degree in Environmental Science is an innovative dual-component degree program for students seeking a challenging and invigorating science curriculum. The first component, the Environmental Science major, provides students with disciplinary breadth in several areas important to environmental science. The second component, a minor or concentra-
tion in one of seven environmental science areas, provides students with focused disciplinary depth in an area of their choosing. The minor in Environmental Systems and Society is designed for students who wish to gain a deeper understanding of the relationships between environmental science and associated social and political issues.

The IoES also sponsors the Environment/Clusters M1A, M1B, M1CW on the global environment. The cluster format is a series of three integrated courses taught over the fall, winter, and spring quarters. The fall and winter quarter courses consist of lectures and discussions. The spring quarter consists of seminars and activities in which students explore specialized environmental and sustainability topics such as the history of environmental thought, environmental policy, and the impacts of human population.

At the graduate level, the IoES offers the Environmental Science and Engineering (DEnv) degree program that was founded in 1973 by Nobel laureate Dr. Willard Libby, who perceived a need to train environmental scientists, engineers, and policymakers in a more interdisciplinary manner than is afforded by traditional PhD programs.

The program is designed with an appropriate balance of breadth and specific skills, based on a strong master’s-level foundation in a science or engineering discipline. The curriculum consists of formal coursework across a full spectrum of relevant physical, biological, social, and engineering disciplines, as well as interdisciplinary research training through nine-month problems courses.

The program has awarded the Doctor of Environmental Science and Engineering degree to over 200 students, and UCLA remains unique in the country in awarding such a degree.

Undergraduate Study

The Environmental Science major is a designated capstone major. In collaboration with a local agency or nonprofit institution, students work individually and in groups to complete projects that require them to integrate many of the skills, principles, theories, and concepts they have learned throughout the curriculum and apply them to real systems. Students are expected to contribute meaningfully to the analysis and solution of particular environmental science issues involving multiple disciplines and stakeholders with different perspectives. Those completing the major should possess critical thinking skills, problem-solving abilities, and familiarity with essential computational, data collection, and analysis skills, as well as demonstrate effective oral and written communication skills. Graduates should also be able to identify key ethical issues and analyze the consequences of various professional dilemmas, as well as work productively as part of a team.

Environmental Science BS Capstone Major

The Environmental Science BS program represents strong collaboration between the Institute of the Environment and Sustainability and the Departments of Atmospheric and Oceanic Sciences; Civil and Environmental Engineering; Earth, Planetary, and Space Sciences; Ecology and Evolutionary Biology; Environmental Health Sciences; and Geography. The program is designed for students who are deeply interested in the study of environmental science. There are two components to the program, and both must be completed to receive the degree. The first component, the Environmental Science major, requires completion of lower-division requirements grounded in basic natural sciences, a six-course upper-division environmental science requirement reflecting the disciplinary breadth of environmental science, two social sciences/humanities courses, participation in an ongoing environmental science colloquium, and completion of an environmental science practicum. The second component is a minor or concentration in one of seven environmental science areas, each associated with a particular department. With assistance from IoES staff, students must formally apply to and be accepted by the associated department to receive the minor.

Preparation for the Major

Required: Chemistry 14A, 14B, and 14BL (or 20A, 20B, and 20L), Earth, Planetary, and Space Sciences 1 (required for the Earth and environmental science minor) or Environment M10, Life Sciences 7A, 7B, Mathematics 3A and 3B (or 31A and 31B), Physics 5A and 5C (or 1A and 1B), Statistics 12 or 13.

For the atmospheric and oceanic sciences and environmental engineering minors, Chemistry and Biochemistry 14C (or 30A) or Physics 1C (or 5B), and Mathematics 3C (or 32A) are also required.

For the conservation biology minor, Chemistry and Biochemistry 14C (or 30A), Life Sciences 7A, 7C, and 23L are also required.

For the Earth and environmental science minor, Chemistry and Biochemistry 14C (or 30A) or Physics 1C (or 5B), Earth, Planetary, and Space Sciences 1, and one course from 5, 13, 15, or 61, and Mathematics 3C (or 32A) are also required.

For the environmental health concentration, Chemistry and Biochemistry 14C (or 30A), Life Sciences 7C, and 23L are also required.

For the environmental systems and society minor, two courses from Chemistry and Biochemistry 14C (or 30A), Life Sciences 7C and 23L, Mathematics 3C (or 32A), and Physics 1C (or 5B) are also required.

For the geography/environmental studies minor, two courses from Chemistry and Biochemistry 14C (or 30A), Life Sciences 7C and 23L, Mathematics 3C (or 32A), and Physics 1C (or 5B), plus Geography 5 and one course from 1, 2, 3, 4, or 6 are also required. Students should take these courses before enrolling in upper-division courses.

Each course applied toward requirements for preparation for the major must be passed with a grade of C– or better. Students receiving a grade below C– in two courses, either in separate courses or repetitions of the same course, are subject to dismissal from the major.

Transfer Students

Transfer applicants to the Environmental Science major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two general chemistry courses with laboratory for majors, two general biology courses with laboratory for majors, two calculus courses, and two calculus-based physics courses.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

The major consists of four requirements: environmental science, social sciences/humanities, practicum/colloquium, and minor or concentration, as follows:

Environmental Science Requirements

Required: One course from each of the following six core environmental science areas. No more than two courses may be from any one department. (1) One atmospheric and water science course from Atmospheric and Oceanic Sciences 101, 103, M105, 130, Earth, Planetary, and Space Sciences 153, or Geography 105; (2) one climate science course from Atmospheric and Oceanic Sciences 102, 112, Geography 102, 104, M106, or M131; (3) one Earth science course from Earth, Planetary, and Space Sciences 101, C113, 119, 139, 150, Environment M127, Geography 100, 101, or M107; (4) one ecology and conservation biology course from Ecology and Evolutionary Biology 100, 109, 116, 151A, 154, Environment 121, Geography 111, or 113; (5) one environmental management course from Environ M134, M135, 157, 159, 160, 162, 163, 166, or Public Policy C115; (6) one pollutant sources, treatment, fate, and transport course from Atmospheric and Oceanic Sciences 104, Chemical Engineering C118, Civil and Environmental Engineering 153, 154, M166, Environmental Health Sciences 100, C125, C152D, or C164.

Social Sciences/Humanities Requirements

Required: (1) One humans and environment course from Environment M132, M133, M137, 150, M153, Geography M128, 135, M137, 150, M153, 156, or Philosophy 125; (2) one policy and politics course from Environment M155, 157, M161, M164, 166, or M167.

Practicum/Colloquium Requirements

Required: Environment 180A, 180B, 180C, and four terms of 170 or 185A.

Minor and Concentration Requirements

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another
For the environmental systems and society minor, seven courses from Environment M109, M111, 121, M130, M132, M133, M134, M135, M137, 150, M153, M155, 157, 159, 160, M161, 162, 163, M164, 166, M167, 186 are required.

For the geography/environmental studies minor, three courses from Geography M106, M107, M109, 110, 113, M115, 116, 122, 123, 124, 125, 126, M127, M128, 129, M131, 132, 135, M137, 159C, 159D, 159E, and any two additional upper-division geography courses (except those from the preceding list and courses 194 through 199) are required.

Each course applied toward requirements for the major, except Environment 170 and 185A, must be taken for a letter grade. Students must maintain an overall grade-point average of 2.0 (C) or better in all courses applied toward the major.

Honors Program

The honors program provides exceptional students an opportunity for advanced research and study, under the guidance of a faculty member, that leads to the completion of an honors thesis or research project. To qualify for graduation with honors, students must (1) complete all requirements for the major, (2) have a cumulative grade-point average of 3.5 or better in upper-division coursework in the major and an overall GPA of 3.0 or better, (3) complete at least 8 units of Environment 198 taken over at least two terms, and (4) produce a completed satisfactory honors thesis. The honors thesis or research project is in addition to the requirement of the completed practicum in environmental science project. Contact the student affairs officer for further information.

Environmental Systems and Society Minor

The Environmental Systems and Society minor is designed for students who wish to augment their major program of study with courses addressing the relationships between environmental science and associated social and political issues. The minor seeks to impart a deeper understanding of environmental systems related to air, land, and water resources, providing a basis for sound professional decision making.

To enter the minor, students must be in good academic standing (2.0 grade-point average) and file a petition at the Institute of the Environment and Sustainability, 300 La Kretz Hall, 310-206-9193.

Required Lower-Division Courses (8 units):

- Environment M1A, M1B, M1CW
- Environment M1A is enforced requisite to M1B, which is enforced requisite to M1CW. Limited to first-year freshmen. Letter grading. M1A-M1B, Lecture, three hours; discussion, two hours. Food as lens for sustainability with emphasis on local and global environmental and sustainability topics as related to food, including air, water, biodiversity, climate change, food access, food security, and health. Satisfies Writing II requirement.

II. Sustainability and Environment

12. Sustainability and Environment

Lecture, three hours; discussion, one hour. Introduction to sustainability with emphasis on environmental components, including Earth’s physical, chemical, and biological processes as related to resource demands and management. Examination of application of scientific methods and tools in helping to understand and solve sustainability problems. Case studies illustrating how natural and social scientists work on environmental sustainability issues. Focus on global climate change, biodi...
M109. Human Impact on Biophysical Environment: What Science Has Learned. (4) (Same as Geography M109.) Lecture, three hours; reading period, one hour. Designed for seniors/juniors. Examination of history, mechanisms, and consequences of interactions between human decision-making and environment, explored in depth of three thematic topics (deforestation, desertification, and greenhouse gas increase and ozone depletion) and four major subjects (soil, biodiversity, water, and landforms). P/NP or letter grading.

M111. Earth and Its Environment. (4) (Same as Atmospheric and Oceanic Sciences M110.) Lecture, three hours. Overview of Earth as system of distinct, yet intimately related, physical and biological elements. Origins and characteristics of atmosphere, oceans, and land masses. Survey of history of Earth and of life on Earth, particularly in relation to evolution of physical world. Consideration of possibility of technological solutions to global environmental problems using knowledge gained during course. Letter grading.

M114. Soil and Water Conservation. (4) (Same as Geography M114.) Lecture, three hours; discussion, one hour. Enforced requisite: Geography 1 or 2 or Life Sciences 1 or 3. Designed for juniors/seniors. Systematic study of processes of and hazards posed by erosion, sedimentation, development, and pollution and techniques needed to conserve soil and maintain environmental quality. Scope includes agriculture, forestry, mining, and other rural uses of land. P/NP or letter grading.

121. Conservation of Biodiversity. (4) Lecture, three hours; discussion, two hours. Not open to credit for students with credit for Ecology and Evolutionary Biology M121. Examination of natural biotic and abiotic systems. Description of distribution of biodiversity and natural processes that maintain it. Critical analysis of various levels of threats and multi-dimensional changes required for mitigating threats. Letter grading.

M127. Soils and Environment. (4) (Same as Ecology and Evolutionary Biology M127 and Geography M127.) Lecture, three hours; discussion, one hour, field trips. General treatment of soils and environmental implications: soil development, morphology, and worldwide distribution of soil orders; physical, chemical, hydrologic, and biological properties; water use, erosion, and pollution; management of soils as related to plant growth and distribution. P/NP or letter grading.

M130. Environmental Literature and Culture. (5) (Same as English M330.) Lecture, three hours; discussion, one hour. Enforced requisite: satisfaction of Entry-Level Writing requirement. Introduction to core themes, questions, and methods within interdiscipli- nary field of environmental humanities. Examination of how different culture forms (e.g., fiction, journalism, poetry, visual art) represent environmental issues. Topics may include biodiversity, wilderness, food, urban ecology, postcolonial ecologies, environmental justice, and climate change. P/NP or letter grading.

M305L. Environmental Literature and Culture (Service Learning). (5) (Same as English M305L.) Lecture, three hours; discussion, one hour; fieldwork, two hours. Enforced requisite: satisfaction of Entry-Level Writing requirement. Introduction to core themes, questions, and methods within interdisciplinary field of environmental humanities. Examination of how different culture forms (e.g., fiction, journalism, poetry, visual art) represent environmental issues. Topics may include biodiversity, wilderness, food, urban ecology, postcolonial ecologies, environmental justice, and climate change. Service learning component includes meaningful work with off-campus agency/agency selected by instructor. P/NP or letter grading.

Upper-Division Courses

M109. Human Impact on Biophysical Environment: What Science Has Learned. (4) (Same as Geography M109.) Lecture, three hours; reading period, one hour. Designed for seniors/juniors. Examination of history, mechanisms, and consequences of interactions between human decision-making and environment, explored in depth of three thematic topics (deforestation, desertification, and greenhouse gas increase and ozone depletion) and four major subjects (soil, biodiversity, water, and landforms). P/NP or letter grading.

M111. Earth and Its Environment. (4) (Same as Atmospheric and Oceanic Sciences M110.) Lecture, three hours. Overview of Earth as system of distinct, yet intimately related, physical and biological elements. Origins and characteristics of atmosphere, oceans, and land masses. Survey of history of Earth and of life on Earth, particularly in relation to evolution of physical world. Consideration of possibility of technological solutions to global environmental problems using knowledge gained during course. Letter grading.

M114. Soil and Water Conservation. (4) (Same as Geography M114.) Lecture, three hours; discussion, one hour. Enforced requisite: Geography 1 or 2 or Life Sciences 1 or 3. Designed for juniors/seniors. Systematic study of processes of and hazards posed by erosion, sedimentation, development, and pollution and techniques needed to conserve soil and maintain environmental quality. Scope includes agriculture, forestry, mining, and other rural uses of land. P/NP or letter grading.

121. Conservation of Biodiversity. (4) Lecture, three hours; discussion, two hours. Not open to credit for students with credit for Ecology and Evolutionary Biology M121. Examination of natural biotic and abiotic systems. Description of distribution of biodiversity and natural processes that maintain it. Critical analysis of various levels of threats and multi-dimensional changes required for mitigating threats. Letter grading.

M127. Soils and Environment. (4) (Same as Ecology and Evolutionary Biology M127 and Geography M127.) Lecture, three hours; discussion, one hour, field trips. General treatment of soils and environmental implications: soil development, morphology, and worldwide distribution of soil orders; physical, chemical, hydrologic, and biological properties; water use, erosion, and pollution; management of soils as related to plant growth and distribution. P/NP or letter grading.

M130. Environmental Literature and Culture. (5) (Same as Geography M310.) Lecture, three hours; reading period, one hour. Designed for seniors/juniors. Examination of natural biotic and abiotic systems. Description of distribution of biodiversity and natural processes that maintain it. Critical analysis of various levels of threats and multi-dimensional changes required for mitigating threats. Letter grading.

M132. Environmentalism: Past, Present, and Future. (4) (Same as Geography M132 and Urban Planning M165.) Lecture, three hours. Focus on history and origin of major environmental ideas, movements and counter-movements that spawined, and new and changing nature of modern environmental thought, and how this was later transformed by 19th-century ideas and rise of American conservation. Review of politics of American environmental thought and contemporary environmental questions as they relate to broader set of questions about nature of development, sustainability, and equity in environmental debates. Exploration of issues in broad context, including global climate change, rise of pandemics, deforestation, and environmental justice impacts of war. Letter grading.

M133. Environmental Sociology. (4) (Same as Sociology and Genetics M133 and Sociology M115.) Lecture, three hours; discussion, one hour. Relationship between society and environment. Analysis in detail of interrelations between social factors (such as class, race, gender, and religion) and environmental factors (such as pollution, waste disposal, sustainability, and global warming). P/NP or letter grading.

M134. Environmental Economics. (4) (Same as Economics M134.) Lecture, three hours. Designed for Economics 41 or Statistics 12 or 13, and Economics 101 (may be waived with consent of instructor). Introduction to major ideas of environmental economics, with emphasis on designing incentive policies to protect environment. Highlights important role of using empirical data to test hypotheses about pollution causes and consequences. P/NP or letter grading.

M135. California Sustainable Development: Economic Perspective. (4) (Same as Public Policy M149 and Urban Planning M163.) Lecture, three hours. Examination of specific environmental challenges that California faces. Microeconomic perspective used, with special emphasis on incentives of polluters to reduce their pollution and incentives of local, federal, and state governments. Focus on measurement and empirical hypothesis testing. P/NP or letter grading.

M137. Historical Geography of American Environment. (4) (Same as Geography M137.) Lecture, three hours. Designed for seniors/juniors. Study of systematic changes of natural environment in U.S. during historical time, with emphasis on interplay between and among natural factors of climate, soils, vegetation, and human factors of settlement, and human factors of agriculture, economic activity, technology, and cultural traits. P/NP or letter grading.

150. Environmental Journalism, Science Communication. (3) Lecture, three hours; discussion, one hour. Introduction to environmental journalism, science communications, and new media, including weekly guest lectures by prominent successful practitioners in wide variety of media. Focus onotechnologies, methods, genres, and theories of communicating environmental challenges, exploring solutions, and engaging public in newspapers, television, radio, movies, online, on mobile devices, and through social media. Discussion of possibilities and limitations of different media and importance of communications for environmental science, policy, public understanding, and individual decision making. Production by students of environmental communications in variety of media. P/NP or letter grading.

M153. Introduction to Sustainable Architecture and Community Planning. (4) (Same as Architecture M153.) Lecture, five hours. Examination of how built environment to natural environment through whole systems approach, with focus on sustainable building and green building of communities. Integration of historical, sociological, environmental, social, political, and technical concepts and examination of role of various energy sources, energy conversion technologies, and energy policies in modern life. Analysis of implications of current patterns of energy production and consumption for future economic and environmental well-being. Integration of concepts and methods from physical and life sciences, engineering, environmental science, economics, and public policy. Basic quantitative tools used to analyze and critique technical, economic, and policy choices to address challenges of balancing economic growth and environmental sustainability. P/NP or letter grading.


159. Life-Cycle Analysis for Sustainability Assessment. (4) Lecture, three hours. Designed for Mathematics 3A and 3B (or 31A and 31B), Physics 1A and 1B (or 6A and 6B), and Statistics 12 or 13. Examination of life cycle assessment frameworks and quantitative techniques for systematically and holistically evaluating environmental tradeoffs presented by different alternatives. Focus on methodology of LCA tools, how material inputs and outputs and environmental releases from all activities are associated with life cycle (i.e., raw material extraction, processing, end use, and disposal) of products or services. Discussion of strengths and limitations of LCA as tool for decision making. Students perform life cycle analysis of one technology, product, or service of their choice. P/NP or letter grading.

160. Topics in Environmental Economics and Policy. (4) Seminar; three hours. Designed for Economics 12 or 13. Examination of intersection of environmental economics and policy, with focus on testing policy-relevant environmental hypotheses using economic research approach. Introduction to research methods and analysis techniques aimed at yielding policy-relevant results on various topics such as climate change, pollution, and transportation. P/NP or letter grading.

M161. Global Environmental and World Politics. (4) (Same as Political Science M122B.) Lecture, three or four hours; discussion, one hour (when scheduled). Recommended requisite: Political Science 20. Politics and policy of major global environmental issues such as climate change, integration, and justice in international and political science perspectives. P/NP or letter grading.

162. Entrepreneurship and Finance for Environmental Scientists. (4) Lecture, three hours; discussion, one hour. Focus on entrepreneurship and financial concepts, with emphasis on applications that are vital for implementing environmental solutions in
private, public, and nonprofit settings. Topics include basic elements of finance, project evaluation, financial planning, and marketing. Development of entrepreneurial skills to recognize opportunity and transfer ideas into viable projects that are better for environment and that benefit people and communities. Case studies used to equip students with tools necessary to successfully execute environmental goals and objectives. P/NP or letter grading.

163. Business and Natural Environment. (4) Lecture, three hours. Examination of role of business in mitigating environmental degradation and incentives to be more environmentally responsive. Emphasis on corporate strategies that provide value to stakeholders while responding to environmental concerns. P/NP or letter grading.

M164. Environmental Politics and Governance. (4) (Same as Urban Planning M160.) Lecture, three hours. Environmental planning is more than simply finding problems and fixing them. Each policy must be negotiated and implemented within multiple, complex systems of governance. Institutions and politics matter deeply. Overview of how environmental governance works in practice and how it might be improved. Letter grading.

166. Leadership in Water Management. (4) Lecture, three hours; discussion, one hour. Limited to juniors/seniors. Examination of intersection between scientific, technological, management, and policy issues. Invited experts, scholars, and practitioners discuss relevant issues, including climate change, water infrastructure. Emphasis on solutions involving integrated water supply and wastewater systems. Leadership development through writing instruction and negotiations and media training. P/NP or letter grading.

M167. Environmental Justice through Multiple Lenses. (4) (Same as Urban Planning M167.) Lecture, three hours. Examination of social, economic, and environmental issues, focusing on issues related to social justice. Because environmental inequality is highly complex phenomenon, multidisciplinary and multipopulation approach taken, using alternative ways of understanding, interpreting, and taking action. P/NP or letter grading.

170. Environmental Science Colloquium. (1) Seminar, 90 minutes; one field trip. Limited to undergraduate students. Study of current topics in environmental science, including participation in weekly colloquium series and field trips. May be repeated for credit. P/NP grading.

180. Practicum in Environmental Science. (4) Lecture, three hours; discussion, two hours. Enforced requisite: Statistics 12 or 13. Limited to Environmental Science majors who have completed 40 or more units of preparation for major courses, including statistics, and 12 or more units of upper-division courses toward major or minor requirements. Examination of case studies and presentation of tools and methodologies in environmental science, building on what students have been exposed to in other courses. Letter grading.

180B. Practicum in Environmental Science. (5) Lecture, one hour; laboratory, five hours. Requisite: course 180A. Limited to junior/senior Environmental Science majors. Investigation of various aspects of one environmental case study representing actual multidisciplinary issue. Particular emphasis on developing skills required for working as professionals in this field. Work may involve site investigations, original data collection and analysis, mapping and geographic information systems, analysis of case studies, and law issues. Course to be defined and conducted with collaboration of local agency or nonprofit institution. Letter grading.

180C. Practicum in Environmental Science. (5) Lecture, one hour; laboratory, five hours. Requisite: course 180B. Limited to junior/senior Environmental Science majors. Investigation of various aspects of one environmental case study representing actual multidisciplinary issue. Particular emphasis on developing skills required for working as professionals in this field. Work may involve site investigations, original data collection and analysis, mapping and geographic information systems, analysis of case studies, and law issues. Course to be defined and conducted with collaboration of local agency or nonprofit institution. Letter grading.

183A. Sustainability Talks. (1) Lecture, two hours. Analysis of principles of sustainability through series of lectures and films by world-renowned faculty members, authors, environmentalists, entrepreneurs, policy makers, and progressive thinkers. May be repeated for credit. P/NP grading.

185B. Sustainability Action Research. (2) Lecture, two hours; fieldwork, four hours. Investigation of issues of campus sustainability, including energy efficiency, transportation, waste stream management, sustainable food practices, and more by student research to generate coalition of student researchers that, together with faculty members and UCLA staff, strive to make UCLA more sustainable community. May be repeated for credit. Letter grading.

185C. Sustainability Action Leaders. (3) Seminar, two hours; fieldwork, six hours. Students lead research teams to investigate issues of campus sustainability, including energy efficiency, transportation, waste stream management, sustainable food practices, and more to generate coalition of student researchers that, together with faculty members and UCLA staff, strive to make UCLA more sustainable community. May be repeated for credit. Letter grading.

186. Comparative Sustainability Practices in Local/Global Settings. (4) Lecture, two hours; fieldwork, four hours. Guided fieldwork and comparative analysis used to assess local sustainability practices and policies in diverse regional or international settings. Emphasis on comparing role of local and regional culture, geography, economic climate, and governmental policies on sustainability awareness and practices. Use of observations, interviews, and unobtrusive measures to document changes in the role of local and global context on sustainability behavior of individuals, small businesses, and other institutions in everyday life. Letter grading.

188A-188B. Special Courses in Environment. (4-2) Limited to juniors/seniors. Course 188A (two hours) and course 188B (two hours). Departmentally sponsored experimental or temporary courses, such as those taught by visiting faculty members, analyzing and writing up research proposals. S/U or letter grading.

M192. Undergraduate Practicum in English: Journals. (2) (Same as English 192 and Comp 192.) Lecture, two hours. Training and supervised practical experience for undergraduate student editors of campus journals supervised by faculty members in English, Institute of the Environment and Sustainability, and/or Writing Programs. May be repeated for credit. P/NP or letter grading.

193. Journal Club Seminars: Environment. (1) Seminar, one hour. Limited to undergraduate students. Discussion of readings selected from current literature of field. May be repeated for credit. P/NP grading.

195. Community or Corporate Internships in Environmental Science. (2 or 4) Tutorial, to be arranged. Preparation: 3.0 grade-point average in major. Limited to junior/senior majors. Internship in supervised setting in community agency or business related to environmental science and/or sustainability. Students meet on regular basis with faculty supervisor and provide periodic reports of their experience. May be repeated for a maximum of 8 units. Individual contract with supervising faculty member required; consult undergraduate adviser. P/NP grading.

196. Honors Research in Environmental Science. (2 to 4) Tutorial, for students admitted to junior/senior Environmental Science majors. Development and completion of honors thesis or comprehensive research project under direct supervision of faculty member. Must be completed during summer term and total of at least 8 units. May be repeated for credit. Individual contract required. Letter grading.

199. Directed Research in Environment. (2 to 4) Tutorial, two hours. Preparation: submission of written proposal outlining study or research to be undertaken. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Progress reported to faculty mentor at end of term. Culminating paper or project required. May be repeated for credit, but only 4 units may be taken each term. Individual contract required. P/NP or letter grading.

Graduate Courses

250. Tools for Sustainability Assessment. (4) Lecture, three hours. Recommended preparation: introduction to transportation and growth control, economics, environmental economics, business and management, or public policy analysis. Public discourse about implications of current patterns of production and consumption of energy and various goods and services suggests such patterns are unsustainable. What is meant by sustainability and how is it quantified? Focus on concepts and tools to assess sustainability at micro-level of individuals, products, or firms using various techniques, including life-cycle assessment, input-output analysis, and cost-benefit analysis. Exploration of sustainability at macro-level for one entire nation. Discussion of usefulness and limitations of various metrics as guide for public and private decision making. S/U or letter grading.

250G. Information, Technology, Business, and Society. (3) Lecture, three hours. Enrolled in a research seminar to bring sound social sciences methods to latest technology developments to design effective information-based solutions to social problems. Topics include selection and framing of research questions, developing measurements, designing appropriate methods (e.g., surveys, experiments, using available data), ethical issues, and writing research proposals. Letter grading.

277. Leaders in Sustainability. (4) Lecture, three hours. Common course for all students participating in Leaders in Sustainability Program, including those from engineering, law, management, public affairs, public health, natural and social sciences, and others. Creation of environment for academically based discussions on various sustainability-related themes, capitalizing on wide mix of disciplines represented among participating students. UCLA faculty members, external speakers, and leadership skills to help students learn more about how to best put their interests in sustainability to use. Letter grading.

297A-297B. Advanced Topics in Environment and Sustainability. (4-2) Seminar, four hours (course 297A) and two hours (course 297B). Advanced study and analysis of variable current topics in environment and sustainability. Consult Schedule of Classes for topics and instructors. May be repeated for credit with consent of instructor. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeships under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

400. Environmental Science and Engineering Problems Course. (8) Seminar, eight hours. Primarily designed for environmental science and engineering doctoral students. Multidisciplinary technical and socioeconomic analysis and prognosis of significant current environmental problems. May be repeated for credit. S/U grading.

M412. Effective Technical Writing. (2) (Same as Environmental Health Sciences M412.) Seminar, two hours. Essentials of grammar, punctuation, syntax, organization, and format needed to produce well-written professional articles, research reports, memos, letters, and résumés. Development of technical writing skills using critique, exercises, and examples. S/U grading.
M413. Advanced Technical Writing. (2) (Formerly numbered 410B.) (Same as Environmental Health Sciences M414.) Seminar, two hours. Development of advanced technical writing skills, with exercises focused on preparation of manuscripts for publication in peer-reviewed journals. S/U grading.

M414. Effective Oral Presentation. (2) (Formerly numbered 410A.) (Same as Environmental Health Sciences M415.) Seminar, two hours. Introduction to oral presentations. Development of oral presentation skills, including content structure, visual aids, delivery, and audience interaction. S/U grading.

M415. Advanced Oral Presentation. (2) (Formerly numbered 410C.) (Same as Environmental Health Sciences M416.) Seminar, two hours. Development of advanced oral presentation skills. Preparation for oral qualifying examination. S/U grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate advisor and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.


599. Doctoral Dissertation Research. (2 to 12) Tutorial, to be arranged. Limited to students who have advanced to doctoral candidacy. May not be applied toward any degree course requirements. May be repeated for credit. S/U grading.

Scope and Objectives

The Department of Environmental Health Sciences focuses its research and educational activities on the protection of human health from biological, chemical, and physical hazards in the environment. Its graduates are scientists, professionals, and leaders capable of identifying and measuring stressors of environmental concern; evaluating the health, environmental, and all other impacts of such stressors; developing means for their effective management; and evaluating alternative policies directed at improving and protecting health and the environment. Such training is accomplished through several degree programs that offer specialized study in selected academic areas of environmental health sciences such as air pollution, environmental biology, environmental chemistry, environmental policy, toxicology, built environment and health, climate and health, industrial hygiene, and water quality.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Environmental Health Sciences offers Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Environmental Health Sciences.

Environmental Health Sciences

Upper-Division Courses

100. Introduction to Environmental Health. (4) Lecture, three hours; discussion, one hour. Preparation: one course each in chemistry and biology. Introduction to environmental health, including coverage of sanitary principles and chronic and acute health effects of environmental contaminants. P/NP or letter grading.

101. Fundamentals of Chemistry in Environmental Health. (2) Seminar, one hour; discussion, one hour. Designed for undergraduate students in Public Health minor or master’s and doctoral students in Fielding School of Public Health. Ideal for students who feel that their background in chemistry is not strong enough and are planning to take course 100. C200A, C200B, or 200C are concurrently enrolled in one of those courses. Interactive seminar with focus on critical concepts in chemistry that students need for core environmental health sciences courses. P/NP, S/U, or letter grading.

C125. Atmospheric Transport and Transformations of Airborne Chemicals. (4) Lecture, four hours. Preparation: one year of calculus, one course each in physics, organic chemistry, and physical chemistry. Designed for science, engineering, and public health students. Role of regional or long-range transport, and atmospheric lifetimes and fates of airborne chemicals in phenomena such as photochemical smog, acid deposition, stratospheric ozone depletion, accumulation of greenhouse gases, and regional and global distribution of volatile toxic compounds. Concurrently scheduled with course C225. P/NP or letter grading.

C135. Environmental Policy for Science and Engineering. (4) Lecture, four hours. Limited to senior undergraduate and graduate students. Examination of theoretical underpinnings of several major types of regulatory policy, as well as practical issues involved in implementing and enforcing each. Exploration of selection and impact of regulatory forms from variety of disciplines and viewpoints. Focus on traditional command and control regulation (including self-executing performance standards and permitting), market-based regulation (such as emissions trading), remediation, and emerging regulatory approaches such as management-based regulation and alternative assessment. Issues of compliance and enforcement. Concurrently scheduled with course C235. P/NP or letter grading.

C140. Fundamentals of Toxicology. (4) Lecture, four hours. Preparation: one course each in biology, organic chemistry, and biochemistry. Essential aspects of toxicology, with emphasis on human species. Absorption, distribution, excretion, biotransformation, as well as basic toxicologic processes and organ systems. Concurrently scheduled with course C240. Letter grading.

C152D. Properties and Measurement of Airborne Particles. (4) Lecture, four hours. Preparation: one year each of chemistry, physics, and calculus. Basic theory and application of scientific principles to environmental health, including properties, behavior, sampling, and measurement of aerosols and quantitative problems. Concurrently scheduled with course C252D. P/NP or letter grading.

C157. Risk Assessment and Standard Setting. (4) Seminar, four hours. Requisites: course C140, Epidemiology 100. Designed to provide students with opportunity to review scientific basis for association of selected occupational and environmental exposures with disease. Special emphasis on critical evaluations of literature. Attention specifically to interface of science and regulatory standards. Concurrently scheduled with course C257. P/NP or letter grading.

C164. Fate and Transport of Organic Chemicals in Aquatic Environment. (4) Lecture, four hours. Requisites: Chemistry 14A and 14B, or 20A and 20B. Evaluation of how and where and in what form and concentration organic pollutants are...
distributed in aquatic environments. Study of mass transport mechanisms moving organic chemicals between phases, biological degradation and accumulation, and chemical reactions. Effect of humic substances on these processes. Concurrently scheduled with course EN 199. P/NP grading.

C198A. Foundations of Environmental Health Sciences for Professionals. (6) Lecture, four hours. Preparation: course C185C. General laboratory practice within environmental microbiology, sampling of environmental samples, classical and modern molecular techniques for enumeration of microbes from environmental samples, and translation of molecular activity in environmental samples, laboratory setups for studying environmental biotechnology. Letter grading.

C198B. Foundations of Environmental Health Sciences for Public Health Professionals. (6) Lecture, four hours. Preparation: one year of undergraduate biology and chemistry. Introduction to field of environmental health sciences designed for students pursuing MS degrees. Examination of series of topics relevant to science of environmental health (e.g., population, agriculture/food, microbiology, energy, climate change, water, waste, air) by introducing scientific basis from ecological perspective and describing how topics relate to health on biochemical and molecular basis. Emphasis on scientific aspects of field, with focus on critique of primary literature and quantitative approaches for examination of topics to provide skills that are critical to perform research. Concurrently scheduled with course C200B. Letter grading.

C200A. Foundations of Environmental Health Sciences. (6) Lecture, four hours; discussion, two hours; outside study, two hours. Corequisite: course M166. General laboratory principles of field, as well as translation of scientific principles of field, as well as translation of scientific basis from ecological perspective and description of how topics relate to health on biochemical and molecular basis. Emphasis on scientific aspects of field, with focus on critique of primary literature and quantitative approaches for examination of topics to provide skills that are critical to perform research. Concurrently scheduled with course C185A. Letter grading.

C200B. Foundations of Environmental Health Sciences for Public Health Professionals. (6) Lecture, six hours; preparation: one year of undergraduate biology and chemistry. Introduction to field of environmental health sciences designed for students pursuing M.P.H. degree in Environmental Health Sciences doctoral students. Examination of series of topics relevant to science of environmental health (e.g., population, agriculture/food, microbiology, energy, climate change, water, waste, air) by introducing scientific basis from ecological perspective and describing how topics relate to health on biochemical and molecular basis. Emphasis on scientific aspects of field, with focus on critique of primary literature and quantitative approaches for examination of topics to provide skills that are critical to perform research. Concurrently scheduled with course C200A. Letter grading.

C225. Atmospheric Transport and Transformations of Airborne Chemicals. (4) Lecture, four hours. Preparation: one year of calculus, one course in each of physics, organic chemistry, and physical chemistry. Design of science, engineering, or health students. Role of regional or long-range transport, and atmospheric lifetimes and fates of airborne chemicals in phenomena such as photochemical smog, acid deposition, stratospheric ozone depletion, accumulation of greenhouse gases, and regional and global distribution of volatile toxic compounds. Concurrently scheduled with course C125. S/U or letter grading.

C225. Atmospheric Transport and Transformations of Airborne Chemicals. (4) Lecture, four hours. Preparation: one year of calculus, one course in each of physics, organic chemistry, and physical chemistry. Design of science, engineering, or health students. Role of regional or long-range transport, and atmospheric lifetimes and fates of airborne chemicals in phenomena such as photochemical smog, acid deposition, stratospheric ozone depletion, accumulation of greenhouse gases, and regional and global distribution of volatile toxic compounds. Concurrently scheduled with course C125. S/U or letter grading.

M229. Epidemiology of Foodborne Illnesses. (4) (Same as Epidemiology M252.) Lecture, four hours. Requisites: Epidemiology 200A, 200B, and 200C (or 100). Description and critical evaluation of epidemiologic methods in approaches to understanding incidence risk factors and prevention strategies of violence and violence-related injury. Letter grading.

209. Practical Applications in Environmental Health Sciences. (2) Lecture, two hours. Enforced prerequisite: courses C200A, C200B. Description of primary leading environmental and occupational health problems that environmental health practitioners face today, conducted as series of lectures, assignments, hands-on field exercises, and group projects, to help students develop skills necessary to integrate concepts across disciplines in field of environmental health. May satisfy some requirements needed to qualify for Environmental Health Specialist (REHS) certification. S/U or letter grading.

M211. Epidemiologic Methods in Violent Injury. (4) (Same as Epidemiology M252.) Lecture, four hours. Requisites: Epidemiology 200A, 200B, and 200C (or 100). Description and critical evaluation of epidemiologic methods in approaches to understanding incidence risk factors and prevention strategies of violence and violence-related injury. Letter grading.

212. Applied Ecology. (4) Lecture, four hours. Preparation: one year of introductory biology. Recommended prerequisite: Microbiology 101 or 102. Designed for environmental health sciences graduate students and students in UCLA Biosafety Training Program. Interactive seminar with focus on critical concepts in applied ecological aspects of environmental health, including conservation biology, assessment of environmental impacts, and restoration ecology and monitoring of environmental health.
252E. Industrial Hygiene Measurements Laboratory. (3) Laboratory, three hours. Corequisites: courses C252D, C252E. Limited to industrial hygiene majors. Laboratory methods for sampling, measurement, and analysis of gases, vapors, and aerosols found in occupational, environmental, and industrial areas. Use of laboratory equipment and the principles of sampling and analysis. Letter grading.

252F. Industrial and Environmental Hygiene Assessment. (4) Lecture, one hour; discussion, two hours; laboratory, two hours; outside study, four hours. Requisites: courses C200A, C200B, C252D, C252E. Focus on formulating sampling strategies and assessment via walk-through surveys, lectures, group discussion, actual field measurements, laboratory calibrations, and analyses and reports, with emphasis on chemical, physical, and ergonomic hazards. Letter grading.

253. Physical Agents in Work Environment. (2 to 4) Lecture, two hours; laboratory, two hours. Preparation: one year of physics. Physics, measurement methods, health effects, and control methods for radiation (ionizing and nonionizing), noise, and thermal stress in workplace environment. S/U or letter grading.

255. Control of Airborne Contaminants in Industry. (4) Lecture, two hours; laboratory, two hours. Preparation: one year of physics. Requisite: course C252D. Principles and applications of control technology to industrial environments: general and local exhaust ventilation, air cleaning equipment, and respiratory protection. S/U or letter grading.

256. Biological and Health Surveillance Monitoring in Occupational/Environmental Health. (4) Lecture, three hours; discussion, one hour; assignments, three hours. Principles and applications of biological monitoring and health surveillance to assess occupational and environmental exposures to organic and inorganic chemicals and physical factors. Letter grading.

257. Risk Assessment and Standard Setting. (4) Seminar, four hours. Requisites: courses C240, C251, Epidemiology 100. Designed to provide students with opportunity to review scientific basis for association of selected occupational and environmental exposures with disease. Special emphasis on critical evaluation of literature. Attention specifically to interface of science and regulatory standards. Concurrently scheduled with course C157. S/U or letter grading.

258. Identification and Analysis of Hazardous Wastes. (4) Lecture, three hours; discussion, one hour; laboratory, one hour; one field trip. Requisites: courses C252E, C252F. Designed to define, identify, label, and quantify hazardous wastes and how workers should be protected. Provides critical understanding of all analytical aspects of hazardous wastes, health effects, and method and practice of handling hazardous wastes. Letter grading.

259A. Occupational Safety and Ergonomics. (4) Lecture, four hours. Overview of most frequent and severe occupational injuries and illnesses, their distribution, causes, analysis methods, and control approaches, including low back pain, falls, machine exposures, upper extremity musculoskeletal disorders, fleet safety, and selected ergonomics topics. Letter grading.

259B. Workplace Safety. (2) Lecture, two hours. Introduction to broad range of topics in workplace safety through lectures on safety hazards, their classification, metrics, control philosophy, and control methods. Specific topics include industrial safety rules, such as fall hazards, machine safety, and fire hazards. Introduction to concepts of safety culture and philosophy. Review and presentation of peer-reviewed articles on topics relevant to course material. Letter grading.


264. Fate and Transport of Organic Chemicals in Aquatic Environment. (4) Lecture, four hours. Preparation: prerequisite for Apparatus laboratory is designed to provide hands-on experience in environmental sciences laboratory, emphasizing the design, performance, and interpretation of environmental chemistry experiments. Letter grading.

M270. Work and Health. (4) Same as Community Health Sciences M278.) Lecture, three hours; preparation: prerequisite for graduate-level methods/statistics course, basic epidemiology. Designed for graduate students. Exploration of impact of work on physical and psychological health in the context of nursing. Focus on psychosocial models, measurement (including hands-on experience), contextual factors (gender, ethnicity, social class), and how work stressors can be ameliorated. S/U or letter grading.

296A-296N. Research Topics in Environmental Health Sciences. (2 each) Seminar, two hours. Advanced study and analysis of current topics in environmental health sciences. Discussion of current research, literature, and selected advanced topics, selected by student and instructor. Graduate-level methods/statistics course, basic epidemiology. Designed for graduate students. Exploration of impact of work on physical and psychological health in the context of nursing. Focus on psychosocial models, measurement (including hands-on experience), contextual factors (gender, ethnicity, social class), and how work stressors can be ameliorated. S/U grading.

400. Field Studies in Environmental Health Sciences. (4) Fieldwork, to be arranged. Field observation and studies in selected community environmental health organizations. May be repeated up to 30 units for M.P.H. degree. Letter grading.
Epidemiology is the study of the distribution and determinants of disease in human populations. Epidemiologists study variations of disease incidence in relation to factors such as age, sex, race, environmental factors, lifestyle, demographic variables, occupational and social characteristics, place of residence, susceptibility, exposure to specific agents, or other relevant characteristics. Also of concern are the temporal and special distribution of disease, examination of trends, and intervals between exposure to causative factors and onset of disease. The scope of the field extends from study of the patterns of disease to the causes of disease with the goal of the control or prevention of disease. What distinguishes epidemiology from other clinical sciences is the focus on health problems in populations rather than in individuals, with the focus on public health.

Epidemiology is a young field with constantly expanding boundaries. The range of activities includes identifying determinants of population health, investigation and control of disease outbreaks, study of environmental and industrial hazards, evaluation of preventive or curative programs or treatments, and evaluation of the effectiveness and efficiency of intervention or control strategies. Many tools of epidemiology are shared with other fields such as microbiology, immunology, medicine, statistics, demography, and medical geography.

There is a growing core of epidemiologic methodology that includes the principles of study design and conduct, and statistical methods. Epidemiologic tools have become relevant for many other fields that study groups of people, e.g., (epi) genetics, global health, pharmacology, medicine, and many others.

Epidemiologists work in many settings, including academia, international health agencies, state and local health departments, federal government agencies and health programs, health maintenance organizations, and numerous research projects privately and publicly sponsored.

The objectives of the Department of Epidemiology fall into three broad categories—research, teaching, and community service. Degrees offered include the MS and PhD in Epidemiology and, through the Fielding School of Public Health, the MPH with a specialization in epidemiology (see Public Health Schoolwide Programs).
Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Epidemiology offers Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Epidemiology.

Epidemiology

Upper-Division Courses

100. Principles of Epidemiology. (4) Lecture, four hours; discussion, two hours. Preparation: one full biological sciences course. Not open for credit to students with credit for courses 200A, 200B, or 200C. Introduction to epidemiology, including factors governing health and disease in populations. Letter grading.

CM175. Terrorism, Counterterrorism, and Weapons of Mass Destruction: Practical Approach. (5) (Same as Honors Collegium M175.) Seminar, three hours. Terrorism, its origins, and ways of addressing terrorism at local, national, and global levels. Guest speakers from variety of UCLA departments and from Los Angeles. Concurrently scheduled with course C275. P/NP or letter grading.

197. Individual Studies in Epidemiology. (2 to 4) Tutorial, for credit. Limited to juniors/seniors. Intensive individual study, with scheduled meetings to be arranged between faculty member and student. Signed reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200A. Methods I: Basic Concepts and Study Designs. (6) Lecture, six hours; discussion, four hours. Enforced requisite or corequisite: Biostatistics 100A. Introduction to basic concepts, principles, and methods of chronic and infectious disease epidemiology. Letter grading.

200B. Methods II: Prediction andValidation. (6) Lecture, four hours; discussion, four hours. Enforced requisites: course 200A, Biostatistics 100A, 100B. Introduction to basic concepts, principles, and methods of chronic and infectious disease epidemiology. Letter grading.


203. Topics in Theoretical Epidemiology. (2) Lecture, two hours. Selected topics from recent research areas in epidemiologic theory and quantitative methods. Topics selected from biologic models, epidemiologic models, problems in inference, model specification problems, design issues, analysis issues, and confounding. May be repeated for credit with consent of instructor. S/U or letter grading.


M211. Statistical Methods for Epidemiology. (4) (Same as Statistics M250.) Lecture, four hours. Preparation: two terms of statistics (such as Biostatistics 100A, 100B). Requisites: courses 200B, 200C. Concepts and methods tailored for analysis of epidemiologic data, with emphasis on tabular and graphical techniques. Expansion of topics introduced in courses 200B and 200C and introduction of new topics, including principles of epidemiologic analysis, trend analysis, smoothing and sensitivity analysis. S/U or letter grading.

212. Statistical Modeling in Epidemiology. (4) (Formerly numbered M212.) Lecture, four hours. Preparation: two terms of statistics (three terms recommended). Recommended: courses M204 or M211. Principles of modeling, including meanings of models, a priori model specification, translation of models into explicit population assumptions, model selection, model diagnostics, hierarchical (multilevel) modeling. S/U or letter grading.

M216. Applied Sampling. (4) (Same as Statistics CM244.) Lecture, three hours; discussion, one hour. Designed for upper-division and graduate students in social or life sciences and those who plan to major in Statistics. Topics include methods of sampling from finite populations, sources of sampling and estimation bias, and methods of generating efficient and precise estimates of population characteristics. Practical applications of sampling methods via lectures and hands-on laboratory exercises. S/U or letter grading.

M218. Questionnaire Design and Administration. (4) (Same as Community Health Sciences M218.) Lecture, four hours. Requisites: courses 200B and 200C, or Community Health Sciences 211A and 211B. Design, testing, field use, and administration of data collection instruments. Emphasis on questionnaires. Letter grading.

220. Principles of Infectious Disease Epidemiology. (4) Lecture, four hours. Preparation: course 100 or 200A. Ascertainment of infection, transmission, and epidemiological parameters rather than clinical and pathological aspects. Specific diseases discussed in depth to illustrate epidemiologic principles. S/U or letter grading.

222. Biology and Ecology of Human Parasitic Diseases. (4) Lecture, four hours. Information on all aspects of parasitic organisms causing human disease, including their morphology, biology, means of diagnosis, and diseases they cause. From epidemiological perspective, special emphasis on way in which parasites maintain themselves in nature and manner in which organisms are transmitted to people. Letter grading.

224. Zoonotic Diseases and Public’s Health. (4) Lecture, four hours. Examination of wide variety of infectious disease agents (viruses, bacteria, and protozoan and helminth parasites) causing diseases in individual and populations. Discussion of these diseases in natural environment, how they are transmitted from animals to humans, and methods for their prevention and control. Letter grading.

226. Global Health Measures for Biological Emergencies. (4) (Same as Ecology and Evolutionary Biology M226.) Lecture, four hours. Requisite: course 220. Mitigation of bioterrorism falls outside traditional public health programs and public health graduate education. Because of seriousness of such threats, it is important that individuals trained in public health understand problems and responses. Letter grading.


232. Methods in Research of Marginalized and Hidden Populations. (2) Lecture, two hours. Preparation: two terms of statistics (three terms recommended). Areas of intensive study, with scheduled meetings to be arranged between faculty member and student. Signed reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

233. Communicable Disease Epidemiology in Corrections. (2) Lecture, two hours. Preparation: courses 200A, 200B, and 200C (or 100). Overview of communicable disease epidemiology, public health program, and research issues specific to correctional population in U.S., including factors that contribute to transmission of communicable disease epidemics. S/U or letter grading.

240. Cardiovascular Epidemiology. (2) Lecture, two hours. Topics include definition, pathogenesis, descriptive epidemiology, magnitude of risk factors, strategies for prevention, lipoprotein metabolism, and hypertension, and chronic lung disease. Letter grading.


246. Epidemiology of Aging. (2) Lecture, two hours. Preparation: courses 200A, 200B, and 200C (or 100). Sexually transmitted diseases; medical/biological aspects, epidemiology and control in developed and developing countries. S/U or letter grading.

249. Genetic Epidemiology I. (2) Lecture, two hours. Preparation: at least one course in epidemiology, bios- 

200C; for nonmajors: course 100. Methodologic issues in contemporary genet- ic contributions to disease, identifying genes, and characterizing their main effects and interactions with environmental factors. S/U or letter grading.

252. Epidemiologic Methods in Violent Injury. (4) (Same as Environmental Health Sciences M211.) Lecture, four hours; laboratory, two hours. Requisites: courses 200A, 200B, and 200C (or 100). Description and critical evaluation of epidemiologic methods in approaches to understanding incidence risk factors and prevention strategies of violence and violence-related injury. Letter grading.

254. Nutritional Epidemiology I. (4) (Same as Community Health Sciences M251.) Lecture, two hours; discussion/laboratory exercise, one hour. Preparation: introductory biostatistics and epidemiology courses. Review of all aspects of contemporary nutrition sciences that require application of epidemiologic principles and methods, including foodborne outbreaks, and evidence-based regulatory assessment of health claims for foods. Experience in actual world of collecting, analyzing, and interpreting data related to nutrition and health or diseases affecting dietary nutrient intake. S/U or letter grading.

260. Environmental Epidemiology, I or II. (4) Lecture, three hours. Preparation: courses 200A, 200B, and 200C (or 100). Epidemiologic methods applied to evaluation of human health consequences of environmental hazards. Topics include air pollution, pesticides, drinking water contaminants, use of GIS. Review of recently completed environmental science studies published in peer-reviewed literature. S/U or letter grading.


265. Epidemiologic Methods in Occupational and Environmental Health. (4) Lecture, three hours. Preparation: introductory biostatistics and environmental epidemiology methods applied to evaluation of human health consequences of occupational and environmental hazards, including study design, exposure assessment, and statistical methods. Topics include clustering, meta-analysis, risk assessment, and policy development. Illustrated by case studies, with focus on techniques to critically evaluate and interpret current literature. S/U or letter grading.

266. Global Health and Tropical Medicine. (4) Lecture, four hours. Introduction to tropical diseases and global health. How humanitarian health issues, maternal-child health, research in tropics, World Health Organization, and national health policies and constraints all are related with respect to health on worldwide scale. Letter grading.

267. Methodologic Issues in Reproductive Epidemiology. (2) Seminar, two hours. General discussion of methodologic issues important to epidemiologic studies of reproductive outcomes, including fertility, low birth weight, prematurity, birth defects, pregnancy loss, and perinatal mortality. Approaches to study design and data collection and identification of potential sources of bias illustrated through review of recent studies published in literature and with particular focus on occupational and environmental exposures and program training documentation on form available from Student Affairs Office. May be repeated toward minimum course requirement; 4 units may be applied toward 44-unit minimum total required for M.P.H. degree. Letter grading.


270. Behavioral Epidemiology. (4) Lecture, four hours; laboratory, two hours. Preparation: introductory biostatistics and epidemiology research. How to collect, analyze, and interpret behaviors that can be associated with disease outcomes, including methods to collect survey data (i.e., design of questionnaires, interviewing techniques, use of technology to collect data) and methods to collect and analyze qualitative data (e.g., ethnographic interviews, focus groups, systematic observations). Overview information on epidemiology of key behavioral factors affecting human health, including smoking, substance use, physical activity, and healthcare utilization. S/U or letter grading.

272. Social Epidemiology. (4) (Same as Community Health Sciences M272.) Lecture, two hours; discussion/laboratory exercise, one hour. Preparation: course 100. Relationship between sociological, cultural, and psychosocial factors in etiology, occurrence, and distribution of morbidity and mortality. Emphasis on lifestyles and other socioeconomic variables associated with general susceptibility to disease and subsequent mortality. Letter grading.

273. Responsible Conduct of Research in Global Health. (2) (Same as Public Health M273.) Lecture, two hours. Preparation: courses 200A, 200B, and 200C. Introduction to fundamental principles of public health ethics, current ethical procedures, guidelines, and requirements, and ethical issues facing public health professionals working in developing countries. History of public health issues, unique ethical issues in research in developing countries, analysis of ethical implications of informed consent, responsibility to study community, mechanisms of study approval, role of funders, and role responsibilities of review boards. S/U or letter grading.


291. Seminar: Special Topics in Epidemiology. (2) Seminar, two hours. Preparation: courses 200A, 200B, and 200C (or 100). Review of current epidemiologic research containing recent medical literature. May be repeated for credit. S/U or letter grading.


294. Epidemiology and Policy of Occupational and Environmental Health Issues. (2) Seminar, two hours. Preparation: courses 200A, 200B, and 200C (or 100) and/or 260. Introduction to demands that go beyond pure science, with focus on issues such as risk communication, potential influence (and ethics) of oversight panels and external review groups on presenting results and conclusions, and interest of government agencies. S/U or letter grading.

295. Seminar: Epidemiology—Cancer. (2) Seminar, two hours. Preparation: courses 200A, 200B, and 200C (or 100). Topics include concepts of cancer epidemiology and review of current epidemiologic research in cancer recent medical and epidemiologic literature. May be repeated for credit. S/U or letter grading.

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400. Field Studies in Epidemiology. (4) Fieldwork, to be arranged. Field observation and studies in selected community organizations for health promotion or medical care. Students must file field placement and program training documentation on form available from Student Affairs Office. May not be applied toward MS minimum course requirement; 4 units may be applied toward 44-unit minimum total required for M.P.H. degree. Letter grading.

403. Computer Management and Analysis of Health Data Using SAS. (4) (Same as Biostatistics M403B) Lecture, two hours; laboratory, two hours. Preparation: Biostatistics 100A, 100B (100B may be taken concurrently). Introduction to practical issues in management and analysis of health data using SAS programming language. Cross-sectional and longitudinal population-based data sets to be used throughout to illustrate principles of data management and analysis for addressing biomedical and health-related hypotheses. Letter grading.

404. Advanced SAS Techniques for Management and Analysis of Epidemiologic Data. (2) Lecture, three hours. Preparation: course M403 or 410. Hands-on experience with SAS and focus on using SAS data and PROC steps efficiently to manage, clean, analyze, and tabulate epidemiologic data from data collection systems. Common issues and solutions of data management and interpretation of documentation, data definitions, unique subject identifiers, and nonstandard data formats. S/U or letter grading.

410. Management of Epidemiologic Data. (2) Lecture, two hours. Preparation: data management for various epidemiologic studies, confidentiality concerns; data management systems; introduction to mainframe computer. S/U or letter grading.

412. Public Health Surveillance. (2) Lecture, two hours. Preparation: courses 200A, 200B, and 200C (or 100). Biostatistics 100A. Overview of public health surveillance methodology, including (1) design, implementation, and evaluation of surveillance systems, (2) analysis and interpretation of surveillance data, and (3) application of surveillance methods to specific health-related outcomes. S/U or letter grading.

413. Methods of Scientific Communication. (2) Lecture, two hours. Preparation: course 100 or 200A. Principles of scientific writing and presentation. Approaches to developing effective written, oral, and visual presentations of epidemiologic research findings. Communication issues arising in conduct of research, including informed consent process. S/U or letter grading.

420. Field Trials in Developing Countries. (4) Lecture, four hours. Preparation: course 100 or 200A or 200B. Introduction to practical concepts and issues in conducting epidemiologic field research in developing countries, including formulating research questions, study site selection, ethical considerations, and logistics of data and specimen collection. S/U or letter grading.

495. Teacher Preparation in Epidemiology. (2) Seminar, two hours. Preparation: 18 units of cognate courses in area of specialization. May not be applied toward master's degree minimum total course requirement. May be repeated for credit. S/U grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate advisor and graduate dean, and host campus advisor, department chair, and graduate chair. Enrollment of UCLA students in courses taken under cooperative arrangements with USC. No more than 8 units may be applied toward master's degree minimum total course requirement; may not be applied toward minimum graduate course requirement. S/U grading.
596. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. Limited to graduate students. Individual guided studies under direct faculty supervision. Only 4 units may be applied toward M.P.H. and MS minimum total course requirement. May be repeated for credit. S/U grading.

597. Preparation for Master's Comprehensive or Doctoral Qualifying Examinations. (2 to 12) Tutorial, to be arranged. Limited to graduate students. May not be applied toward any degree course requirements. May be repeated for credit. S/U grading.

598. Master's Thesis Research. (2 to 8) Tutorial, to be arranged. Only 4 units may be applied toward M.P.H. and MS minimum total course requirement; may not be applied toward minimum graduate course requirement. May be repeated for credit. S/U grading.

599. Doctoral Dissertation Research. (2 to 12) Tutorial, to be arranged. May not be applied toward any degree course requirements. May be repeated for credit. S/U grading.

**Scope and Objectives**

Ethnomusicology involves the study of all kinds of music from all over the world, using a variety of disciplinary perspectives. The Department of Ethnomusicology, the largest and first of its kind in a U.S. university, offers courses that cover the music of virtually every region of the world and of many ethnic groups in the U.S., as well as courses on jazz, popular music, and film music. Most courses combine an interest in music as an art form with questions about how musical art and practice relate to other aspects of culture, society, politics, and economics. Courses are also given on the methodology and aesthetics of music and the study of music perception and cognition using experimental methods. In addition to academic courses, the department offers performance ensemble courses in jazz and several world and American music traditions. At the undergraduate level most of the performance courses are open to nonmajors, and many academic courses target nonmajors; prior knowledge of music is not expected or required. The Department of Ethnomusicology is aligned with the Departments of Music and Musicology and aspires to promote productive collaborations between performance and scholarship, a cross-cultural, global understanding of the art of music, and preparatory training for a broad range of careers in music after students graduate.

The undergraduate major in Ethnomusicology is offered with two concentrations: one in jazz studies and one in world music with emphases in general world music, performance/composition, public ethnomusicology, and scholarly research. Admission requires a audition/interview. The major provides students with a wide-ranging liberal arts education in music. At its core, this includes (1) comprehensive knowledge of music cultures of the world, (2) understanding of the interrelationship of music, society, and culture, (3) grounding in the basics of Western music theory and musicianship, and (4) the experience of playing in one or several musical ensembles from various traditions around the world.

The concentration in jazz studies seeks to provide students who emerge as outstanding and well-rounded jazz musicians with a strong academic foundation, and to prepare students to enter professional careers in the music world, as well as graduate study in various aspects of music such as composition, arranging, film scoring, jazz performance, research, and teaching.

Beyond the core and emphasis requirements, students in the world music concentration may, through elective courses, prepare for a variety of career goals, including the study of ethnomusicology in graduate school, composing and performing music, working in the music industry, serving society in the nonprofit sector, or becoming a K through 12 music teacher.

At the graduate level, the department offers MA and PhD degrees in Ethnomusicology, with a specialization in systematic musicology or music and anthropology. Both degree programs train students for future university teaching careers, as well as careers in library science and archiving, the music industry, public service, and music technology. The department provides fellowships, teaching assistantships, and research assistantships for qualified students.

**Undergraduate Study**

The Ethnomusicology major is a designated capstone major. The capstone project is individualized to each student and requires a creative process either through music performance/composition, a research project, or an internship with a self-reflective journal detailing the process. Through that process, students are expected to demonstrate a broad knowledge base and competency in performance, writing, and/or composition and ability to apply knowledge and experience to the specific requirements of the capstone; conceive and successfully complete a project that is expressive of their specific interests and acquired expertise; and display, through written documentation or live presentation, the requisite communication and, in some cases, teamwork required by work in this field.

**Ethnomusicology BA Capstone Major**

**Admission**

Applicants are reviewed individually, based on a questionnaire, grade-point average, two letters of recommendation, test scores, a personal statement of purpose, and an interview/application. Applicants who are unable to travel to UCLA have the option of submitting a video-tape of musical performance, following departmental guidelines.

**Preparation for the Major**

All entering freshmen are required to take the Music Theory Assessment Examination either during New Student Orientation or during zero week of fall quarter. The examination score is used to determine eligibility and placement in first-year music core courses (Ethnomusicology M6A, M6B, M6C for jazz studies and world music concentrations and Music 20A, 20B, 20C for world music concentration only). Examination results may require enrollment in Music 3 as a requisite to both Ethnomusicology M6A and Music 20A. Enteri...
dents with fewer than 15 units of prior music theory must take the Music Theory Assessment Examination.

**Jazz Studies Concentration**

**Required:** Ethnomusicology M6A, M6B, M6C, with grades of C– or better, 12 units of instruction in jazz performance (courses 71A through 71I), and 12 units of ethnomusicology world music performance organizations, jazz performance ensembles (courses 91A through 91Z), and/or world music specializations (courses 68A through 68Z).

**World Music Concentration**

**Required:** Ethnomusicology M6A, M6B, M6C, with grades of C– or better, 20A, 20B, 20C, with grades of C or better, Music 20A, 20B, 20C, with grades of C or better, and 12 units of ethnomusicology world music performance organizations (courses 91A through 91Z), private instruction in music (course 92), and/or world music specializations (courses 68A through 68Z).

**The Major**

**Jazz Studies Concentration**

**Required:** Ethnomusicology M110A, M110B, M111, C122A, C122B, C122C, 127A, 127B, 127C, 129A, 129B, 129C; 12 units of course 161T and/or 177; 12 units of courses 171A through 171I; one 4-unit upper-division elective course selected from ethnomusicology; and one capstone senior recital or project (course 186).

**World Music Concentration**

**Required:** Ethnomusicology 175 or 181, 183; 12 units from courses 161A through 161Z, 162, and/or 168A through 168Z; a minimum of eight upper-division ethnomusicology courses (32 to 36 units); and a capstone project in either (1) performance/composition, (2) public ethnomusicology, (3) scholarly research, or (4) other potential emphasis concepts in consultation with a faculty adviser.

**Performance/Composition Capstone:** Students must fulfill the capstone final project requirement (4 units) through a public recital (performance). Students must enroll in Ethnomusicology 199 (2 units) and pass a recital permission jury. Instrumental and vocal performers must present a portion of their recital performance, and composers must present excerpts from their recital scores in front of two faculty members. Students also enroll in Ethnomusicology 186 (2 units) during the term in which they perform their recital or their composition(s) are performed.

**Public Ethnomusicology Capstone:** Students must fulfill the capstone internship requirement, which consists of 8 units of Ethnomusicology 195B, in an institution approved by the faculty sponsor. Students must write a final research paper (at least 10 pages) at the completion of each internship.

**Scholarly Research Capstone:** Students must write a capstone thesis (25 to 30 pages) and enroll in Ethnomusicology 199 (2 units minimum) for at least one term while writing the thesis.

**Independent Capstone:** In consultation with a faculty adviser, students can propose capstone projects in other potential emphasis concepts such as technologies, film scoring, interactive arts, dance, and more.

**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

**Graduate Degrees**

The Department of Ethnomusicology offers Master of Arts (MA), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Ethnomusicology.

The Graduate Council of the UCLA Academic Senate voted to suspend admissions to the Ethnomusicology graduate programs effective fall quarter 2017.

**Ethnomusicology**

**Lower-Division Courses**

5. Music Around World. (5) Lecture, four hours; discussion, one hour; outside study, 10 hours. Overview of world’s musical traditions by selecting one or two case studies from each of nine musical world regions; Pacific, East Asia, South Asia, Middle East, Africa, Europe, Latin America, and U.S. and Canada. P/NP or letter grading.

M6A-M6B-M6C. Introduction to Musicianship. (2-2-2) (Same as Music M6A-M6B-M6C and Music History M6A-M6B-M6C.) Laboratory, four hours. Preparation: placement examination. Course M6A is enforced requisite to M6B, which is enforced requisite to M6C. Students must receive grade of C– or better to proceed to next course in sequence. Introduction to musicianship through in-depth exploration of basic common musical elements and training in aural recognition, sight singing, dictation, and keyboard skills. Focus on topics such as tonal and modal harmony, rhythm, improvisation, composition, notation, and ear training to prepare students for later theory courses, participation in music ensembles, and advanced study in music, and professional careers. Letter grading.

10A-10B-10C. World Music Theory and Musician- ship. (5-5-5) Lecture, two hours; discussion, four hours; laboratory, two hours; outside study, seven hours. Course 10A is requisite to 10B, which is requisite to 10C. Limited to Ethnomusicology and World Arts and Cultures majors. Introduction to and participation in musical systems of selected world cultures throughaural and written notations, vocal and instrumental skills, melodic and rhythmic dictation, improvisation, and composition. Letter grading.

11A-11B-11C. World Music Systems and Structures. (5-5-5) Lecture, four hours; discussion, four hours; outside study, seven hours. Requisite: course 10C. Course 11A is requisite to 11B, which is requisite to 11C. Limited to Ethnomusicology majors. Students must receive grade of C or better to proceed to next course. Advanced study and analysis of music systems and aesthetic concepts from selected world cultures through aural and written notations, vocal and instrumental skills, melodic and rhythmic dictation, improvisation, and composition. Letter grading.

15. American Life in Music. (4) Lecture, three hours. Impact of ethnicity, race, gender, and other social processes on American music in late 20th century; use of and creativity in music to respond to and shape contemporary social processes. P/NP or letter grading.

20A-20B-20C. Musical Cultures of World. (5-5-5) Lecture, four hours; discussion, one hour; outside study, 10 hours. Enforced requisite: Music 20C with grade of C or better. Traditional and popular musics from many different countries, with introduction to basic ethnomusicological concepts and development of listening and analytical skills. Each course may be taken independently for credit. Letter grading.

20A. Europe and Americas; 20B. Africa and Near East; 20C. Asia.

25. Global Pop. (5) Lecture, four hours; discussion, one hour. Development of world music or world beat, including its meaning and importance to contemporary culture as well as its history and impact. P/NP or letter grading.

30. Music and Media. (5) Lecture, four hours; discussion, one hour. Exploration of ways music is mediated to people by industry, technologies, and corporations. Survey of leading theorists of media and exploration of case studies. P/NP or letter grading.

35. Blues, Society, and American Culture. (5) Lecture, four hours; discussion, one hour. Sociocultural history and survey of blues music tradition from its roots in West Africa to its emergence in African American oral culture, with emphasis on philosophical underpinnings and social and political impact of blues and its influence on development of country, jazz, gospel, rhythm and blues, rock, hip-hop music, and other mediums. P/NP or letter grading.

40. Music and Religion. (5) Lecture, four hours; discussion, one hour. Survey of nature, role, and power of music in religious rituals and world views.比较 music and ritual of Hinduism, Buddhism, Judaism, Christianity, and Islam, as well as religious traditions of Native Americans and syncretic religious practices in Americas such as African American gospel music, Brazilian Candomble, Cuban Santería, and Haitian voudou. Letter grading.

45. Music of Bollywood and Beyond. (5) Lecture, four hours; discussion, one hour; outside study, 10 hours. History and development of South Asian film scores in their filmic context, especially omnipresent songs that most distinctively characterize this genre. P/NP or letter grading.

50A-50B. Jazz in American Culture. (5-5) Lecture, four hours; discussion, one hour. Outside study, seven hours. Course 50A is not requisite to 50B. Survey of development of jazz in American culture. Discussion of different compositional/performance techniques and approaches that distinguish different sub-styles within jazz and to another, as well as key historical figures that shaped development of jazz from its early years through modern jazz. Important historical social issues (segregation, Depression, World War II, Civil Rights Movement) that intersect with history of U.S. and jazz music. P/NP or letter grading. 50A. Late 19th Century through 1940s. 50B. 1940s to Present.

60. J.S. Bach in His World and Ours. (5) Lecture, four hours; discussion, one hour. Examination of life and music of J.S. Bach in historical and cultural context of his era through its musical manifestations in present, including changes in performance styles, scholarly studies, reception, and contemporary fan culture. P/NP or letter grading.


71A-71L. Instruction in Jazz Performance. (2 each) (Formerly numbered 71L.) Studio, one hour of individual instruction. Limited to Ethnomusicology jazz studies majors. Knowledge of jazz repertoire, concepts, and techniques gained through private lessons on specific instruments and voice. Students meet weekly with instructor to demonstrate their perfor-
mance skills and receive assessment of their progress in learning material. May be repeated for maximum of 12 units. Letter grading. 71A. Guitar. 71B. Percussion. 71C. Piano. 71D. Saxophone. 71E. Strong Bass. 71F. Trombone. 71G. Trumpet. 71L. Voice.

M73. Music and Religion in Popular Culture. (5) (Same as Music History M73.) Lecture, four hours; discussion, one hour. Survey of popular music in religious traditions since the 1970s. Growth of music in Jewish denominations, including Orthodox, Reform, and Conservative, and Christian contemporary worship, from evangelical to cross-over artists performing in mainstream. Credit for both courses M73 and M173 not allowed. P/NP or letter grading.

M87. Spiritual Courtship in Music. (5) (Same as Music M87 and Music History M87.) Lecture, four hours; discussion, four hours. Limited to undergraduate Ethnomusicology, Music, and Music History majors. Study and analysis of current and/or special topics in ethnomusicology, music, and music history taught by resident and visiting faculty members. May be repeated for credit with topic and instructor change. Letter grading.


92. Private Instruction in Music. (2) Studio, one hour. Limited to Ethnomusicology majors. Private or semiprivate music instruction with distinguished community-based musician, that must be arranged by students and approved by course instructor. May be repeated for credit without limitation. Letter grading.

Upper-Division Courses

C100. Audiovisual Archiving in 21st Century. (4) Seminar, three hours. Designed for Ethnomusicology majors. Examination of history, present state, and future directions of audiovisual archiving, with specific focus on preservation, ethics, copyright, contracts, fieldwork, preservation, and access and issues related to technology, space, budgets, and staffing. Concurrently scheduled with course M108B. Letter grading.

105. Music Business. (4) Lecture, four hours; outside study, eight hours. Designed for junior/senior Ethnomusicology majors in public ethnomusicology emphasis. How music industry functions and how products are created, marketed, and consumed. Basic information on production of recordings and legal issues faced by musicians, students, and scholars who use music in their work. P/NP or letter grading.


106B. Contemporary North American Indian Music. (4) Lecture, three hours; discussion, one hour. Contemporary, Native American musical expression, including popular styles (folk, country, rock), intertribal Indian musical genres (powwow), syncretic religious music, and traditional/historic Pan-Indian music styles and their impact. P/NP or letter grading.

107. South American Indian Music. (4) Lecture, four hours; outside study, eight hours. Native South American traditional music and its role in indigenous societies. Topics include relationship between speech and song, use of music by shamans, musical structures, and use of indigenous music in creating nationalist and popular music styles. Letter grading.


M110A-M110B. African American Musical Heritage. (5-5) (Same as African American Studies M110A-M110B.) Lecture, four hours; discussion, one hour. P/NP or letter grading. M110A. Sociocultural history and survey of African American music covering Africa and its impact on Americas; music of 17th through 19th centuries; minstrelsy and its impact on representation of blacks in film, television, and theater; religious music, including hymns, spirituals, and gospel; black music of Caribbean and Central and South America; and music of black Los Angeles. M110B. Sociocultural survey of Afro-American music covering blues, pre-1947 jazz styles, rhythm ‘n’ blues, soul, funk, disco, hip-hop, and symbiotic relationship between recording industry and effects of cultural politics on black popular music productions.

M111. Ellingtonia. (4) (Same as African American Studies M111.) Lecture, three hours. Music of Duke Ellington, his life, and far-reaching influence of his efforts. Ellington’s music, known as Ellingtonia, is one of largest and perhaps most important bodies of music ever produced in U.S. Covers many contributions of other artists who worked with Ellington, such as composer Billy Strayhorn, musicians Johnny Hodges, Cootie Williams, and Mercer Ellington. P/NP or letter grading.

CM112. African American Music in California. (4) (Same as African American Studies CM112A.) Lecture, four hours. Historical and analytical examination of African American music in California, including history, migration patterns, and urbanism to determine their impact on development of African American music in California. Concurrently scheduled with course CM122. P/NP or letter grading.

113. Music of Brazil. (4) Lecture, three hours. History of ethnic and art music in Brazil, with some reference to Portuguese and Spanish traditions. P/NP or letter grading.

M115. Musical Aesthetics in Los Angeles. (4) (Same as Chicana and Chicano Studies M115.) Lecture, three hours. Confronting aesthetics from classical perspective of art as intuition, examination on cross-cultural basis of diverse musical contexts within vast multicultural metropolis of Los Angeles, with focus on various musical networks and specific experiences of Chicanos/Latinos, African American, Asian American, rock culture, Western art music tradition, and commercial music industry. P/NP or letter grading.

M116. Chicano/Latino Music in U.S. (5) (Same as Chicana and Chicano Studies M116.) Lecture, four hours; discussion, one hour. Historical and analytical examination of musical expression of Latino peoples who have inhabited present geographical boundaries of U.S. P/NP or letter grading.


118. Development of Rock. (5) Lecture, four hours. Examination of historical development of rock from 1950s to present, with attention to its socio-cultural and political impact on American society and beyond. P/NP or letter grading.

M119. Cultural History of Rap. (5) (Same as African American Studies M119.) Lecture, four hours; discussion, one hour. Introduction to development of rap music and hip-hop culture, with emphasis on musical and verbal qualities, philosophical and political ideologies, gender representations, and influences on cinema and popular culture. P/NP or letter grading.

120A-120B. Development of Jazz. (4-4) Lecture, four hours; discussion, one hour. Introduction to jazz; its historical background and its development in U.S. P/NP or letter grading.

121. Cross-Cultural Perspectives in Jazz. (4) Lecture, four hours. Exploration of assimilation and reten tion of jazz from U.S. in various countries, with particular emphasis on jazz forms that have developed from musical traditions that originate in African countries. Concurrently scheduled with courses C222A-C222B-C222C. Letter grading.

122A. Early Jazz to Swing Era. C122B. Bebop to Avantgarde. C125A-C. C125C. Jazz since Sixties. 123. Music of Bebop. (4) Lecture, three hours. Study of jazz bebop tradition, including analysis of composi tions and solo forms, instrumentation, and development from 1940 to present. P/NP or letter grading.

124. Electric Music of Miles Davis. (4) Lecture, four hours; outside study, eight hours. Enforced requisites: course 11C. Careful examination of artistic body of Miles Davis’ electric music (1967 to 1991). Influences and impetus that fueled his soaring move from acoustic to electric music. Examination of Davis’ complex and challenging relationship with music industry as his art moved through periods of multidimensional growth and evolutionary development. May be repeated to his use of contemporary jazz, funk, rhythm and blues, rock, southern and west African, Brazilian, European avant-garde, Cuban, Indian, flamenco, and ambient music. Concurrently scheduled with course C222A. Letter grading.

125A-125B-125C. Jazz Composition and Arranging. (2-2-2) Lecture, two hours; outside study, four hours. Examination of various aspects of jazz composition. Differentiation between improvisation and non-improvisation, as well as modes of composition and arranging, and introduction to basic arranging concepts. Letter grading. 125A. Early Jazz to Swing Era. 125B. Bebop to Avant-garde. 125C. Jazz since Sixties. 126A. Introduction to Jazz Arranging and Orches tration. (2) Seminar, two hours. Requisite: course 129C. Study and practice of skills used in arranging and orchestrating music in jazz idiom. Students create and orchestrate their own arrangements. Study of specific instruments and their unique application and application in jazz (jazz notation and terminology, transcription, woodwind doublings, brass muted, etc.). Writing for smaller ensembles, culminating with arrangements to be read by one UCLA Jazz Combo. Letter grading.

126B. Jazz Arranging and Orchestration. (2) Seminar, two hours. Enforced requisites: courses 126A, 126C. Continuation of concepts from course 126A, with focus on full sectional writing and in-depth score analysis. Culminates with arrangements to be read by UCLA Jazz Orchestra I. Letter grading.

127A-127B-127C. Jazz Keyboard Harmony. (2-2-2) Laboratory, two hours; outside study, four hours. Enforced requisites: courses 111A-111B-111C. Course 127A with grade of C or better is enforced
requirement is enforced. It is essential that students have a solid grounding in music theory and practice before embarking on this course. Prerequisites: Courses 11A, 11B, and 11C. Limited to 30 students and approved by course instructor. May be repeated for credit without limit.

C141. Music of Turkey and Iran. (4) Seminar, three hours. Limited to junior/senior Ethnomusicology majors. Comparative study of music of Iran and other related areas, including Turkey, with particular reference to their historical and cultural background, sources on music theory and aesthetics, with special emphasis on mode and religious identity and as tool of political domination and resistance. Letter grading.

C142. Survey of Classical Music in India. (4) Lecture, four hours. Examination of melodic, metric, and formal structures of Indian classical music in context of religious, sociocultural, and historical background of country. P/NP or letter grading.

C155. Intangible Cultural Heritage Worldwide. (4) Lecture, three hours. Designed for Ethnomusicology, Music History, and World Arts and Cultures majors. Intangible cultural heritage policy and practice, examination of history of heritage conservation; concepts of tangible and intangible heritage; pioneering roles of Japan, South Korea, and Taiwan. Exploration of intangible cultural heritage focal point of much cultural policy worldwide; tensions among international ideals, nation-state nationalisms, regionalism, ethnicity, and indigenousness; implications for cultural policies and practices in other countries; roles of private individuals, community initiatives, and professional organizations in cultural preservation schemes; and related concept of sustainability. Concurrently scheduled with course C255. Letter grading.


C168A-168O. Advanced World Music Specialization. (1 each) Activity, two hours; laboratory, two hours. Open to graduate students with permission of the instructor. May be repeated for credit. Concurrently scheduled with course C259. P/NP or letter grading.

C169. Survey of Music in Japan. (4) Lecture, three hours. Survey of main genres of Japanese traditional music, including gagaku, budhist chant, Biwa music, koto music, Shamisen music, and music used in various theatrical forms. P/NP or letter grading.

161A-161Z. Advanced World Music Performance Organizations. (2 each) Activity, three hours; outside practice, four hours. Open to graduate students with permission of the instructor. May be repeated for credit without limitation. Letter grading.

162. Advanced Private Instruction in Music. (2) Studio, one hour; outside practice, five hours. Pre-requisite: two years of courses 91A through 91Z or 92. Limited to Ethnomusicology majors. Private or semiprivate music instruction with distinguished community-based musician, that must be arranged by students and approved by course instructor. May be repeated for credit without limitation. Letter grading.

163. Pathways to Composition. (4) Lecture, four hours. Enforced requisite: course 11C. Fresh new approach to composing music by both experienced and new composers, while looking at pieces from jazz, classical, and film music repertoire for inspiration and study. Group composition exercises, with improvisation and collaboratively created compositions in myriad of styles to see how different composers develop melodic phrases into musical statements. Observation of how composers create sense of dramatic flow, with composition of student pieces based on these concepts. Study of various composers’ use of rhythmic phrases and call and response, and element of surprise to keep student compositions fresh and dynamic. Writing of compositions based on programmatic stories and specific images by interweaving musical ideas with concepts from visual art, drama, and film. Letter grading.

164. World Music Composition. (4) Lecture, three hours; laboratory, three hours. Open to graduate students. Study, four hours. Requisites: courses 11A, 11B, 11C. Limited to Ethnomusicology majors. Examination in composition using variety of Western and non-Western musical systems. Final project required. Letter grading.

165. Selected Topics in Composition. (4) Lecture, four hours; outside study, eight hours. Evaluation of important musical concepts and approaches to enable students to develop greater compositional technique and understanding. Ways composers of jazz, European classical, and other musical genres have successfully approached use of extended compositional forms. Examination of way in which world music traditions have intermingled with other types of music to create new musical languages. Use of concepts, structural paradigms, and inspiration from literature, visual arts, and other forms to develop student compositions. May be repeated once for credit. Concurrently scheduled with course C270. Letter grading.

166A-166B. Advanced World Music Specialization. (1 each) Activity, two hours. Open to graduate students with permission of the instructor. May be repeated for credit. Concurrently scheduled with course C270. Letter grading.

168A. Music of Africa: Ensembles (2). Activity, three hours; outside practice, one hour. Advanced performance of specializations in traditional vocal music, instrumental music, and dance. May be repeated for credit without limitation. P/NP or letter grading.

168B. Music of China: Zheng. (2). Activity, three hours; outside practice, three hours. P/NP or letter grading.

168C. Music of China: Qin. (2). Activity, three hours; outside practice, three hours.

C169. Music, Science, and Technology. (4) Lecture, four hours; laboratory, four hours; outside study, four hours. Designed for Ethnomusicology, Music, and Music History majors. Application of various fields and technology for both creation and dissemination of music. Introduction to tools and techniques such as CD mastering, digital sampling, recording, and music synthesis, as well as scientific principles underlying such technologies. Concurrently scheduled with course C269. Letter grading.


172A. Cognitive Psychology of Music. (4) Lecture, four hours; discussion, one hour. Designed for non-majors. Introduction to psychology of music; historical background and broad field of study, including use of music as stimulus, tests and measurements, and related modes of musical behavior. P/NP or letter grading.


175. Sociology of Music. (4) Lecture, four hours. Designed for Ethnomusicology, Music History, and Music majors. Introduction to sociology of music, its principles and basic concepts, and its critical significance for sociomusicological inquiry, including study of political economy, music and social structures. P/NP or letter grading.

C176. Psychology of Film Music. (4) Lecture, four hours; outside study, eight hours. Exploration of music in film, animation, and dance through lens of cognitive psychology, with focus on interpretation of film music relative to model of musical meaning. Concurrently scheduled with course C276. Letter grading.

177. Jazz Combo. (2) Activity, two hours; laboratory, four hours. Small group performance and rehearsals in ensembles of three to ten musicians. Minimum of 12 units required for jazz studies concentration students. May be repeated for maximum of 18 units. Letter grading.


180. Analysis of Traditional Music. (4) Lecture, four hours; seminar, two hours; Demands: Ethnomusicology, Music History, and Folklore majors. Intensive study of methods and techniques necessary to understand traditional music. P/NP or letter grading.

181. Anthropology of Music. (4) Lecture, four hours. Designed for Ethnomusicology, Music History, and Anthropology majors. Cross-cultural examination of music in context of social behavior and how musical patterns reflect patterns exhibited in other cultural systems, including economic, political, religious, and social structure. P/NP or letter grading.

CM182. Music Industry, (4) (Same as Music CM182, Music History CM186, and Music Industry M182) Lecture, four hours; discussion, one hour; outside study, seven hours. Limited to Ethnomusicology, Music, and Music History majors. Examination of influence of music industry on way music is created, performed, and distributed, and how it affects society. Historical approach taken, beginning with music publicished in 18th century and continuing through development of audio recordings to MTV and popular music today. Concurrently scheduled with course CM288. Letter grading.

183. Study of Ethnomusicology. (4) Lecture, three hours; outside study, nine hours. Requisites: courses 10A, 10B, 10C, 20A, 20B, 20C. Designed for Ethnomusicology majors. Introduction to history of field, basic fieldwork and analysis methods, and current issues in research. Letter grading.

C184. Public Ethnomusicology. (4) Lecture, four hours; outside study, eight hours. Designed for Ethnomusicology majors. How music industry functions and how products are created, marketed, and consumed. Techniques of pure research, basic and theoreti cal, combined with those of applied research, practical and policy-oriented in approach. Concurrently scheduled with course C286. Letter grading.

185. Information Literacy and Research Skills. (1) Tutorial, one hour. Limited to Ethnomusicology majors. Designed to assist students with becoming informed literate. How to locate, identify, and critically evaluate and use print and electronic information effectively and ethically. P/NP grading.

186. Senior Recital or Project. (2) Tutorial, one hour. Limited to seniors. Final project for students who, with approval from their faculty advisors, perform one-hour recital or have their compositions performed in one-hour recital. Staff supervises rehearsal schedule with appropriate accompaniment and preparation of program for performance. Grades are assigned in term recital is performed or composition is completed and performed. P/NP grading.

188. Special Courses in Ethnomusicology. (4) Lecture, four hours; outside study, eight hours. Selected topics in ethnomusicology. Consult Schedule of Classes for topics and instructors. May be repeated for credit. P/NP or letter grading.

193. Journal Club Seminars: Ethnomusicology. (2) Seminar, two hours; outside study, four hours. Limited to Ethnomusicology majors. Basic literature and discussion of writings on subjects in ethnomusicology. May be repeated for credit. P/NP or letter grading.

C204. Aesthetic and Philosophical Foundations in Systematic Musicology. (4) Lecture, four hours; discussion, one hour; outside study, five to 11 hours. Preparation: 3.0 grade-point average. Limited to seniors. Individual intensive study in ethnomusicology, with scheduled meetings to be arranged between faculty member and student. Tangible evidence of mastery of subject matter resulting in final research project required. May be repeated for maximum of 8 units. Individual contract required. P/NP or letter grading.

197E. Individual Studies in Ethnomusicology. (2 to 4) Tutorial, one hour; outside study, five to 11 hours. Preparation: 3.0 grade-point average. Limited to seniors. Individual intensive study in systematic musicology, with scheduled meetings to be arranged between faculty member and student. Tangible evidence of mastery of subject matter resulting in final research project required. May be repeated for maximum of 8 units. Individual contract required. P/NP or letter grading.

Graduate Courses

C200. Audiovisual Archiving in 21st Century. (4) Seminar, three hours. Designed for Ethnomusicology majors. Examination of history, present state, and future of audiovisual archives, with specific focus on ethics, copyright, contracts, fieldwork, preservation, and access and issues related to technology, space, budgets, and staffing. Concurrently scheduled with course C100. S/U or letter grading.

C201. History of Ethnomusicology. (4) Seminar, three hours; outside study, nine hours. Limited to graduate ethnomusicology students. Basic literature and schools of thought in field of ethnomusicology from late 19th century to 1980s. May be repeated for credit with different topics. P/NP grading.

C202. Current Issues in Ethnomusicology. (4) Seminar, three hours; outside study, nine hours. Limited to graduate ethnomusicology students. Current issues, basic literature, and schools of thought in field of ethnomusicology from 1980s to present. Letter grading.


ethnomusicology

various graphic forms appropriate to them, and ability
nology skills, acoustics, and representational tools for
stration, and practice. Basic skills for research on and
genres of musical expression. S/U or letter grading.
America, working from both general and specific per-
ntensive investigation of problems, theories, interdis-
for graduate students. In-depth examination of intel-
 thought in field of ethnomusicology and related social
studies, nine hours. Limited to graduate ethnomusi-
grading.

Seminar: North American Indian Music. (4) Seminar, three hours. Required: course 106A or 106B. Survey of representative musical styles of Na-
tive North American Indians, including problems of trans-
methods of analysis, symbolic implica-
tions of style and practice, an interdisciplinary approach
the relationship between
music and cultural context. Influence of
western music in acculturative contexts. S/U or letter grading.

Seminar: Latin American Music. (4) Seminar, three hours. Review of bibliographic, methodological, and philosophical bases of musical research in Latin
america, working from both general and specific pers-
pective. Exploration of research problems and in-
vestigations of specific cultures and distinct genres of musical expression. S/U or letter grading.

Seminar: African American Music. (4) (Same as African American Studies CM212A.) Lecture, four hours; outside study, eight hours. Required: M101A or
M101B. Designed for graduate students. In-depth examination of the
historical, migration patterns, and urbanism to determine
their impact on development of African American music in the 20th century. Limited to 20 students. Concurrently scheduled with course CM112. S/U or letter grading.

CM121. African American Music in California. (4) (Same as African American Studies CM212A.) Lecture, four hours; outside study, eight hours. Required: M101A or M101B. Designed for graduate students. In-depth examination of African American music in California, including his-
tory, migration patterns, and urbanism to determine
their impact on development of African American music in California. Concurrently scheduled with course CM112. S/U or letter grading.

C222A-C222B-C222C. Jazz Styles and Analysis. (4-4-4) Lecture, four hours; outside study, eight hours. Designed for Ethnomusicology, Music, and
Musicalology majors. In-depth analysis of jazz styles and repertoire intended for students with music back-

C224. Ethnomusicology of Miles Davis. (4) Lecture, four hours; outside study, eight hours. Limited to graduate students. Careful examination of artistic
body of Miles Davis’ electric music (1967 to 1991). In-
fluences and impetus that fueled his daring move from
acoustic jazz to electric music. Examination of
Davies’ complex and challenging relationship with
music industry as his art moved through periods of
multidimensional growth and evolutionary develop-
ment. Much detail to his use of contemporary jazz,
funk, rhythm and blues, rock, southern and west Af-
rican, Brazilian, European avant-garde, Cuban, In-
dian, flamenco, and ambient music. Concurrently
scheduled with course C212. Letter grading.

C228. Seminar: Balkan Music. (4) Seminar, three hours. Initiation to Balkan music, in-
cluding song text analysis, music instruments, dance
music, rituals and customs, minorities, and ideology. S/U or letter grading.

C230. European Musics: Politics, Identities, Nation-
lologies. (4) Seminar, three hours; outside study, nine
hours. Designed for graduate students. European
classical, popular, and traditional musics, with partic-
ticular attention to way in which music mirrors, negoti-
ates, and contests ideas about and practices of na-
tional and other forms of identity, ideas developed in
other domains of discourse and practice such as phi-
losophy, history, literature, art, and folklore. Examina-
tion of way musicians, ordinary people, and politi-
cians have used music to affect political processes in-
volving in contesting and resolving tensions created
between and among these identity formations. Histori-
cal and analytical examination of 19th and 20th
centuries, with examples from all over European con-
inent. Letter grading.

C233A-233B-233C. European Traditional and Popu-
lar Music. (5-5-5) Discussion, one hour; Review of lit-
erature and theories. Examination of music of vari-
ous styles, periods, genres, and traditions from different
parts of Europe, with special attention to modern issues and pro-
cesses. May be repeated for credit. In Progress (233A, 233B) and letter (233C) grading.

C236B. Musical Performance Practice. (4) Lecture, four hours; out-
side study, eight hours. Introduction to music of var-
ious African cultures and regions. Through readings, lectures, viewing of films, and analysis of music, stu-
dents will familiarize themselves with various music-
related traditions found on African continent and become
more cognizant of contributions that people of Africa have made to world music. Concurrently
scheduled with course C236A grading.

C237. Seminar: African Music. (4) Seminar, three hours. Required: course 136A or C136B. Analysis of literature and schools of thought in African music scholarship from late 19th century to present, in-
cluding some analysis of cultural, social and political aspects of African music. S/U or letter grading.

C240. Music of Arab World. (4) Seminar, three hours. Limited to graduate ethnomusicology stu-
dents, emphasis on the influence of both Western and Arab cultures on Arab harmony and style, technique of improvisation, and contemporary
music with a focus on the role of Arab music in the formation of national identity, with special attention to music of the Arab world. Concurrently
scheduled with course C241. S/U or letter grading.

C241. Music of Turkey and Iran. (4) Seminar, three hours. Limited to graduate ethnomusicology stu-
dents. Comparative study of music of Iran and other
related areas, including Turkey, with particular refer-
ence to the role of music in society, economy, and politics. Sources on music theory and aesthetics, instruments, style, technique of improvisation, and contemporary
practice. Concurrent participation in Near East perfor-

C251. Music of Indonesia. (4) Lecture, three hours; outside study, nine hours. Required: course 146 or 147. Study and analysis of gamelan music, its rep-
or and south Indian classical music. Emphasis on music
history and traditional theory and analysis of present-
day forms, styles, techniques, and musical instru-

C250. Music and Politics in East Asia. (4) Lecture, four hours. Designed for graduate students. Political
imperatives have long had direct and often explicit
impact on music sound and context in East Asia. Ex-
amination of interaction of ideology and musical prac-
tice in medieval Korea and in contemporary Korea, Japan, Taiwan, and China. Concurrently
scheduled with course C150. Letter grading.

C251. Music of Indonesia. (4) Lecture, three hours; outside study, nine hours. Required: course 20C. Em-
phasis on music and related performing arts of Java,
Bali, and other Indonesian islands. Concurrent particip-
tion in performance ensemble. Letter grading. Concurrently scheduled with course 91B or 91H) required. S/U or letter grading.

C252. Seminar: Music of Mainland Southeast Asia. (4) Seminar, three hours. Required: course 20C. Pre-
presentation of materials concerning musical perfor-
mance traditions of Laos, Cambodia, Vietnam, Thai-
land, and Burma, both in mainland Southeast Asia and
and within American context, with perspectives from ar-
chaology, history, performance theory, applied anth-
ropology, and ethnomusicology. S/U or letter grading.

C255. Intangible Cultural Heritage Worldwide. (4) Lecture, three hours. Designed for ethnomusicology,
music history, and world arts and cultures graduate students. Through critical reading of publications by
scholars, officials, and culture-bearers involved in in-
tangible cultural heritage policy and practice, exam-
ination of history of heritage conservation; concepts of tangible and intangible heritage; national
laws and intangible cultural heritage policies and practices in Japan, South Korea, and UNESCO in making intan-
gible cultural heritage focal point of much cultural policy worldwide; tensions among international idioms; nation-state nationalisms, regionalism, eth-
nicity, and indigeneity in creating intangible cultural
eritage policies in different settings; U.S. equivalents to intangible cultural heritage policies and practices in
other countries; roles of private individuals, commu-
nity initiative, and professional organizations in cul-
tural preservation schemes; and related concept of sustainability. Concurrently scheduled with course C155. Letter grading.

C256A. Music in China. (4) Lecture, four hours. Re-
quise: course 20C. Limited to Ethnomusicology ma-
jors. Survey of traditional, popular, and Western-influ-
enced musics currently widespread in China, in-
cluding musical analysis of different genres; examination of contexts in which they exist, Investi-
gation of profound effect of Confucian and Commu-
nist ideologies on music, Concurrently scheduled with course C156A. Letter grading.

C259. Music on China's Periphery. (4) Lecture, four hours; outside study, eight hours. Designed for grad-
et Ethnomusicology, Music, and World Arts and Cultures majors of music in different parts of China's border regions and neighboring countries: technical musical characteristics and important con-
textual issues related to traditional and modern styles from Mongolia, Uighurs of Xinjiang, Tibet, Beto-
Burman peoples, Hmong, and indigenous peoples of
Taiwan. Concurrently scheduled with course C159. S/U or letter grading.

M261. Gender and Music in Cross-Cultural Per-
spective. (4) (Same as Gender Studies M261) Sem-
inar, three hours. Designed to foster in-depth under-
standing of gender in study of music as culture. Topics range from ethnomusicology of gender and sexu-
alities, to modification of music in relation to gender representation to gendered politics via mus-
ical production. S/U or letter grading.

262. Musical Ethnography. (4) Seminar, three hours; outside study, nine hours. Examination of selected
book-length ethnographies, most published in last 10 years, as both literary genre and research procedure. S/U or letter grading.

263. Perspectives in Popular Music Research. (4) Seminar, three hours. Investigation of theoretical par-
adigms, issues, and research models of popular music, with emphasis on world music genres, local/ global markets, mass mediation, appropriation and aesthetics of style, ethnicnic methods, and im-
 pact of popular music studies on ethnomusicology. Letter grading.
254. Urbanism and Music. (4) Seminar, three hours; outside study, nine hours. Theoretical and methodological issues in study of city as cultural entity that affects and is affected by music making. S/U or letter grading.

255. Religion and Music. (4) Seminar, three hours; outside study, nine hours. Cross-cultural examination of role of musical expression as spiritual medium and as artistic expression in world's religions. S/U or letter grading.

256. Charles Seeger’s Life and Thought. (4) Seminar, three hours; outside study, nine hours. Charles Seeger’s (1886 to 1979) major writings and influence as his interest in applied musicology and American composition in 20th century. S/U or letter grading.

257. Music and Ecstasy. (4) Seminar, three hours; outside study, nine hours. Relationship between music and consciousness in different world cultures and role music plays in ecstatic experiences. Phenomena include trance, spirit possession, shamanism, religious ecstasy, mysticism, and artistic inspiration. S/U or letter grading.

258. Modernity and Musical Experience. (4) Seminar, three hours; outside study, 10 hours. Limited to graduate students. Examination of possibilities for subject-centered musical ethnography to account for fragmented musical experience in modern world. Consideration of local and world musics in relation to modernity, postmodernity, globalization, notions of self and subject, power, and media images. Letter grading.

269. Music, Science, and Technology. (4) Lecture, four hours; laboratory, four hours; outside study, four hours. Designed for Ethnomusicology, Music, and Musicology majors. Application of science and technology for both creation and dissemination of music. Introduction to tools and techniques such as CD mastering, digital sampling, recording, and music synthesis. Examination of scientific paradigms and subject-centered musical ethnography to account for the impact of such technologies. Concurrently scheduled with course C169. Letter grading.

270. Selected Topics in Composition. (4) Lecture, four hours; outside study, eight hours. Limited to graduate students. Exploration of important musical concepts and approaches to enable students to develop greater compositional technique and understanding. Ways composers of jazz, European classical, and other musical genres have successfully approached use of extended compositional forms. Examination of way in which world music traditions have interfaced with jazz and other types of music to create new musical languages. Use of concepts, structural paradigms, and inspiration from literature, visual arts, and other sources to develop student compositions. May be repeated once for credit. Concurrently scheduled with course C165. Letter grading.

271. Seminar: Acoustics of Music. (6) Seminar, three hours. Requisite: course 170. Selected topics in acoustics, including laboratory methodologies and practical applications. Topics include Western and non-Western instruments, tuning systems, psychoacoustics, and methods of spectral analysis. May be repeated once for credit. S/U or letter grading.

272. Seminar: Psychology of Music. (6) Seminar, three hours. Seminar topics in psychology of music, including recent findings in brain research, musical perception, learning, cognition, memory, therapy, affect, meaning, and measurement. May be repeated once for credit. S/U or letter grading.

275. Seminar: Aesthetics of Music. (6) Seminar, three hours. Specific topics in Western and non-Western aesthetic thinking, including value, meaning (semiotics, historical development of theoretical perspectives and critical theory, and interpretation. May be repeated once for credit. S/U or letter grading.

276. Psychology of Film Music. (4) Lecture, four hours; outside study, eight hours. Exploration of music in film, animation, and dance through lens of cognition. May be repeated with focus on interpretation of film music relative to model of musical meaning. Concurrently scheduled with course C176. Letter grading.

278. Seminar: Systematic Musicology. (4) Seminar, three hours. Requisite: course 170. Exploration of specific topics in general field of systematic musicology covering disciplines such as anthropology, acoustics, aesthetics, music perception, philosophy, organology, musicology, and experimental approaches. May be repeated for credit. S/U or letter grading.

280. Teaching World Music and Music Appreciation. (4) Seminar, three hours. Preparation: two ethnomusicology courses or concurrent enrollment in course 20A, 20B, or 20C. Designed for ethnomusicology and musicology graduate students. Practical overview of current pedagogical philosophies and texts used in introductory music survey courses, specifically musical appreciation and general world music. Letter grading.

281A-281B. Seminars: Field and Laboratory Methods in Ethnomusicology. (6-6) Seminar, three hours; laboratory, two hours. Requisites: courses 201, 202. Fieldwork concepts and methods using technical equipment, conducting interviews, dealing with ethical issues, and designing research projects. S/U or letter grading.


285. Seminar: Comparative Music Theory. (6) Seminar, three hours. Comparative study of codified music theories of select cultures—Western and non-Western—considered in themselves and as expressions of their societies. Theory considered as science of music; its place between cultural values and artistic practice in different civilizations. S/U or letter grading.

286. Public Ethnomusicology. (4) Lecture, four hours; outside study, eight hours. Designed for Ethnomusicology, Music Industry majors. Examination of influence of music industry on way music is created, performed, studied, evaluated, and consumed. Techniques of pure research, basic and theoretical in nature, and its role in the musical economy. Letter grading.


288. Music Industry. (4) Same as Music CM288 and Musicology CM288. Lecture, four hours; discussion, one hour; outside study, eight hours. Limited to Ethnomusicology, Music, and Musicology majors. Examination of influence of music industry on way music is created, performed, studied, evaluated, and used today. Historical approach taken, beginning with music published in 16th century and continuing through development of recordings to MTV and popular music today. Concurrently scheduled with course CM182. Letter grading.

288. Research Design and Grant Writing in Ethnomusicology. (4) Seminar, three hours; outside study, nine hours. Design of dissertation research proposal, locating and applying for dissertation fieldwork grants, organizing and presenting advanced academic proposals with sophisticated methods and professional writing skills. S/U or letter grading.


291. Ethnomusicology Colloquium Series. (1-2) Re- search group meeting, one hour. Limited to graduate ethnomusicology students. Introduction to new trends and issues in discipline of ethnomusicology in effort to strengthen and stimulate intellectual community within department. Topics vary from term to term and consist of presentations by guest lecturers, faculty members, and students. May be repeated for credit. S/U grading.

292A-292Z. Seminars: Special Topics in Ethnomusicology. (4 each) Seminar, four hours. Designed for graduate students. Utilization of special interests and expertise of regular and visiting faculty; topics of current interest presently offered in ethnomusicology program. S/U or letter grading.

295A. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

295B. Teaching with Technology. (2) Seminar, three hours; outside study, three hours. Limited to graduate ethnomusicology students. Training in presentation, spreadsheet, web design, and digitization software, and its application in classroom and in preparation of electronic teaching portfolio. S/U grading.

295A-295B. Direct Instructional Studies. (2, 4, or 8) Tutorial, to be arranged. May be repeated for credit. S/U grading.


295A-295B. Preparation for Master's Comprehensive Examination or PhD Qualifying Examinations. (2 or 4) Tutorial, to be arranged. May be repeated for credit. S/U grading.

Family Medicine

Upper-Division Course

199. Directed Research in Family Medicine. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

FILM, TELEVISION, AND DIGITAL MEDIA

School of Theater, Film, and Television

103 East Melnitz Building
Box 951622
Los Angeles, CA 90095-1622
310-206-8441
info@tft.ucla.edu

Kathleen A. McHugh, PhD, Chair

Professors

Barbara Boyle, JD
John T. Caldwell, PhD
Thomas F. Denove, BA
Erkki I. Huhtamo, PhD
Liza Johnson, MFA
Deborah Nadzolman Landis, PhD
Stephen D. Mamber, PhD
Purnima Mankekar, PhD
Gelia L. Mercer, MFA
Chon A. Noriega, PhD
Nancy Richardson, MFA
Teri E. Schwartz, MA, Dean
Charles E. Sheetz, MFA
Becky J. Smith, MA
Richard Walter, MA

Professors Emeriti

Jerzy Antczak, MA
Janet L. Bergstrom, PhD
Nicholas K. Browne, EdD
Gyuila Gazdag, MFA
Marina Goldovskaya, PhD
A.P. Gonzalez, MA
Lewis R. Hunter, MA
Barbara Marks
Robert Rosen, MA
Vivian Sobchack, PhD
Howard Suber, PhD
Peter Wollen, BA
John W. Young, MA

Associate Professors

Steven F. Anderson, MFA, PhD
Arne O. Lunde, PhD
Ellen C. Scott, PhD
C. Fabian Wagnister, MFA

Assistant Professors

Kristy M. Guevara-Flanagan, MFA
Rory M. Kelly, MFA
Gina Kim, MFA
Jasmine N. Trice, PhD

Lecturers SOE

Harold L. Ackerman, MA, Emeritus
Mark McCarty, MFA, Emeritus

Lecturers

Tim T. Albaugh, MFA
Ana Lily Amirpour, MFA
Christopher Appelhans
Marc A. Arneson, MA

Bethany Babysky, BA
William J. Barmiński, JD
Eric I. Baum, JD
Anne Beatts, BA
Sury Behar Parker, MFA
Christopher Borey, MFA
Vincent M. Brook, PhD
Robert A. Burgos
Jeffrey A. Burke
James JC Calciano, BFA
David L. Chambers
Julie Chambers
Heather L. Collins, MFA
Karmen Crey, PhD
Richard Edwards, MFA
Jane Evans
StephenFarber, MA
Joshua Feldman, MFA
Melissa Finelli, MFA
James E. Franco, MFA
Alexander S. Franklin, MFA
Alan L. Friel, JD
Michael H. Friend, MA
George Gary, MFA
Jason Gendler, PhD
Charles B. Gervich
Jill L. Goldsmith, JD, MFA
Nicholas E. Griffin, BA
Cecelia Hall
Rhonda Hammer, PhD
Alexander G. Hedlund, MFA
Danielle Heitmuller, MFA
Erin Hill, PhD
Gordon R. Hoffman, BA
Charles D. Holland, MA, JD
Jerome R. Hughto, MA
David B. Iserson, BA
David Johnson, MFA
Michael W. Johnson
Silvia C. Kratzer, PhD
Susan J. Kroyer, BS
Jonathan A. Kuntz, PhD
Neil Landau, BA
Nicholas LaTerza, JD
Sheryl Lee
Valerie M. Lettera, MFA
Kenneth N. Levine
Robert J. Levy, BA
Hans-Martin Liebing, MFA
David MacMillan
David M. Maquiling, BFA
Eric Marin, MA
Tamera Martin
Stephen Mazur
Jeffrey D. Melvoin, BFA
Joshua J. Morgan
Margaret A. Murphy
Paul Nagle, BA
Thomas A. Nunan, BA
Jules Nurnish, MFA
Deland Nuse
Christopher Osborne, MFA
Robin B. Peleck
Mo Perkins, MFA
Jennifer L. Peterson, PhD
Jennifer A. Porst, PhD
Robert Pool
Teresa M. Press Marx
Barry Primus
Daniel J. Pyne, MFA
Bernardo Rondeau, MA
Mark E. Rosman, BA
Michael Rothhaar, BA
Keith F. Rouse, JD, MFA
Benjamin Sampson, PhD
Elisabeth Seidse Annacone, MA
Sudeep Sharma
Benjamin R. Sher, PhD
Robert Skir, MFA
Karen Smalley
Charles Solomon
Beth Sterner
James A. Strain, MA, MFA
John Strauss
Julia Swain, MFA
John W. Sweet, MFA

Scope and Objectives

The Department of Family Medicine provides all students with a basic introduction to family-centered care in both the inpatient and ambulatory settings. During the basic clerkship, students develop (1) an appreciation of the breadth and scope of family medicine, (2) a basic knowledge in the broad content areas of family medicine, and (3) fundamental clinical skills appropriate to family medicine, including the coordination and management of patients with multiple chronic diseases. The overall goal is to provide students with the opportunity to gain an understanding and appreciation of the central role of family physicians in the healthcare system, and to offer advanced clinical training for those students interested in pursuing careers in family medicine. Further, the basic curriculum includes an overview of healthcare issues facing underserved and immigrant populations in urban America.

Family medicine faculty members are in leadership roles in the teaching curriculum and in the Primary Care College. All first-year students are assigned to work with a family medicine preceptor once a month on a longitudinal basis for the entire year as part of the teaching program. In the third and fourth (clinical) years, required and elective opportunities exist. All students take a required four-week clerkship in the third year, which is offered at over 10 teaching sites.

The department offers paid six-week electives known as Summer Research Fellowships after the first year of medical school. This program teaches students how to collect data and submit applications for federal designation as underserved areas. It includes journal article reviews on healthcare reform and disparities, as well as the geographic mal-distribution of physicians and the shortage of primary care physicians in South Los Angeles. Students can also participate in a clinical experience. At the end of the project the students present their work on a poster, joining approximately 80 classmates doing other summer projects support by the dean's office.

For more details on the Department of Family Medicine, see the department website.
Film and Television BA

Capstone Major

The undergraduate Film and Television major encourages development of a personal vision that incorporates creative, practical, intellectual, and aesthetic values. Within the context of a liberal arts education, the program provides a broad background in the field and in the diversity of film and television practice, including courses in history and theory, critical thinking, animation, screenwriting, and the fundamentals of film, video, and television production.

Admission

Students are admitted for fall quarter only. Admission is highly competitive, and only a limited number of students can be accepted each year. In addition to the UC Application for Admission and Scholarships, freshman and transfer applicants must submit a School of Theater, Film, and Television supplemental application. For information about the supplemental application, see the major website.

Transfer Students

Transfer applicants to the Film and Television major with 90 or more units must meet UCLA transfer requirements and, before arriving at UCLA, must complete the School of Theater, Film, and Television general education requirements by either (1) taking college courses that satisfy the school general education requirements or (2) completing the Intersegmental General Education Transfer Curriculum (IGETC) at a California community college or (3) achieving UC reciprocity through completion of general education requirements at another UC campus while a student there.

In addition to the UC Application for Admission and Scholarships, transfer applicants must submit a School of Theater, Film, and Television supplemental application. For information about the supplemental application, see the major website.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

Preparation for the Major

Required: Film and Television 1A, 1B, 1C, 4, 6A, 10A, 33, 51, 52, 84A, and one course from Theater 10, 15, 20, 28A, 28B, 28C, or 30.

The Major

Required: Film and Television 101A, 102A, 102B, 102C, 106B (or 106C), 134, 154, 155, 163; one cinema and media studies elective from 107, 108, M111, 112, 113, 114, M117, or 122N; one capstone departmentally sponsored internship (course 195) taken concurrently with course 194; and a senior concentration (20 units) of advanced film coursework selected from among any one or more of the following areas of study, including at least two courses from within one area:

- Screenwriting: Film and Television 135A, 135B, 135C.
- Producing: Film and Television 146, C147, 183A, 183B, 183C, 184B.
- Animation: Film and Television C181A, C181B, C181C.
- Digital Media: Film and Television C142, C144, C145, C148.

Courses taken to satisfy the senior concentration may not also be applied toward other course requirements in the major.

Scope and Objectives

The purpose of the Department of Film, Television, and Digital Media is to develop in its students a scholarly, creative, and professional approach to film, television, and digital art forms. The aim of the department is to train graduates who will eventually make original contributions in their chosen field.

The department offers an undergraduate minor in Film, Television, and Digital Media; an undergraduate program leading to the Bachelor of Arts in Film and Television; and graduate programs leading to the Master of Arts, Master of Fine Arts, and PhD degrees in Film and Television.

For current or specific information about the programs and faculty members, see the department website.

Undergraduate Study

The Film and Television major is a designated capstone major. Undergraduate students are required to complete one departmentally sponsored internship course as well as coursework related to the senior thesis concentration area. All courses, including capstone senior thesis projects, involve work shopping individual projects. Group participation in the creation and production of each student’s project is core to the curriculum. Specific student learning objectives vary based on concentration area.
Films, Television, and Digital Media

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor. All units applied toward the minor must be taken in residence at UCLA. Film and television courses taken at other institutions cannot be applied toward the minor.

Each minor course must be taken for a letter grade. Students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

**Graduate Degrees**

The Department of Film, Television, and Digital Media offers Master of Arts (MA), Master of Fine Arts (MFA), Candidate in Philosophy (CPHil), and Doctor of Philosophy (PhD) degrees in Film and Television.

**Film and Television**

### Lower-Division Courses

1A-1B-1C. Freshman Symposium. (1-1-1) (Formerly numbered 10A) Laboratory, three hours. Course 1A is enforced requisite to 1B, which is an enforced requisite to 1C. Limited to Film and Television majors. Structured forum in which freshmen meet on regular basis to discuss curricular issues, meet with faculty members from department, and have exposure to array of guest speakers from media industries. Letter grading.

2A-2B-2C. Sophomore Symposium. (1-1-1) (Formerly numbered 10B) Laboratory, three hours. Enforced requisite: course 1C. Course 2A is enforced requisite to 2B, which is an enforced requisite to 2C. Limited to Film and Television majors. Structured forum in which sophomores meet on regular basis to discuss curricular issues, meet with faculty members from department, and have exposure to array of guest speakers from media industries. Letter grading.

4. Introduction to Art and Technique of Filmmaking. (5) (Formerly numbered 122B) Lecture, four hours; discussion, one hour. Students acquire understanding of practical and aesthetic challenges undertaken by artists and professionals in making of motion pictures and television. Examination of film as both art and industry: storytelling, sound and visual design, casting and performance, editing, finance, advertising, and distribution. Exploration of American and world cinema from filmmaker’s perspective. Honing of analytical skills and development of critical vocabulary for study of filmmaking as technical, artistic, and cultural phenomenon. Letter grading.

6A. History of American Motion Picture. (6) (Formerly numbered 106A) Lecture/screenings, eight hours; discussion, one hour. Critical survey of American motion picture history from its invention to its inception. Examination of relationships between program forms, industrial paradigms, social trends, and culture. Starting with television’s hybrid origins in radio, theater, and film, contextualization, viewing, and discussion of key television shows, as well as Hollywood films that comment on radio and television. Consideration of television programs and series in terms of sociocultural issues (consumerism, lifestyle, gender, race, national identity) and industrial practice (programming, policy, regulation, business). Letter grading.

33. Introductory Screenwriting. (4) (Formerly numbered 133) Lecture, one hour; discussion, one hour. Not open for credit to students with credit for course C152/CG152. Structural analysis of feature films and development of professional screenwriters’ vocabulary for constructing, deconstruction, and reconstituting their own work. Screenings of films and selected film sequences in class and by assignment. P/NP or letter grading.

M50. Introduction to Visual Culture. (5) (Same as English M50) Lecture, three hours; discussion, one hour; laboratory; two hours. Enforced requisite: satisfaction of Entry-Level Writing requirement. Study of how visual media, including advertising, still and moving images, and narrative films, influence contemporary aesthetics, politics, and knowledge. P/NP or letter grading.

51. Digital Media Studies. (5) Lecture, three hours; laboratory, one hour. Introduction to history, theory, and authoring skills of digital media, art, and culture. P/NP or Letter grading.

52. Cinematography. (4) (Formerly numbered 150) Lecture, three hours; laboratory, three hours. Enforced requisite: course 1A. Limited to Film and Television majors. Introduction to motion imaging photography for thorough understanding of fundamental tools and principles of cinematography to create images that support and enhance story of film, achieve comprehension of principles of motion imaging photography through lectures, discussions, and screenings, develop skills of cinematographer by shooting exercises during laboratory period, and acquire appreciation of art of cinematography. Language and skills of image construction provided, as well as image analysis and deconstruction. Letter grading.

72. Production Practice in Film, Television, and Digital Media. (2 to 4) Lecture, three hours; laboratory, three hours. Exploration of research, analysis, and conceptualization of dramatic narrative and laboratory experience in one or more various aspects of contemporary production and postproduction practices for entertainment media, including theater, film, video, and digital media. Course may be repeated for maximum of 8 units. Letter grading.

84A. Overview of Contemporary Film Industry. (4) (Formerly numbered 184A) Lecture, three hours; discussion, one hour. Examination of evolving economic structure and business practices in contemporary Hollywood film industry, with emphasis on operations of studios and independent distribution companies, their development, marketing, and distribution systems, and their relationship to independent producers, talent, and agencies. Letter grading.

### Upper-Division Courses

101A-101B-101C. Junior Symposium. (1-1-1) (Formerly numbered 100A) Laboratory, three hours. Course 101A is enforced requisite to 101B, which is an enforced requisite to 101C. Limited to Film and Television majors. Structured forum in which juniors meet on regular basis to discuss curricular issues, meet with faculty members, and have exposure to array of guest speakers from within film industry. Letter grading.

102A-102B-102C. Senior Symposium. (1-1-1) (Formerly numbered 100B) Laboratory, three hours. Enforced requisite: course 101A. Course 102A is enforced requisite to 102B, which is enforced requisite to 102C. Limited to Film and Television majors. Structured forum in which seniors meet on regular basis to discuss curricular issues, meet with faculty members, and have exposure to array of guest speakers from within film and television industry. Letter grading.

106B. History of European Motion Picture. (6) Lecture/screenings, eight hours; discussion, one hour. Historical and critical survey, with examples, of European motion picture both as developing art form and as medium of mass communication. Letter grading.


107. Experimental Film. (6) Lecture/screenings, eight hours; discussion, one hour. Study and analysis of unconventional developments in motion pictures. P/NP or letter grading.

108. History of Documentary Film. (6) Lecture/screenings, eight hours; discussion, one hour. Philosophy of documentary approach in motion pictures. Development of critical standards and examination of techniques of teaching and persuasion used in selected documentary, educational, and propaganda films. Letter grading.

M111. Women and Film. (6) (Same as Gender Studies M111) Lecture, discussion, one hour. Historical and critical approaches to women and cinema that may include authorship, stardom, female genres, and images of women in Hollywood cinema, alternative cinema, and independent cinema from silent era to present. Letter grading.

112. Film and Social Change. (6) Lecture/screenings, eight hours; discussion, one hour. Development of documentary and dramatic films in relation to and as force in social development. Letter grading.

113. Film Authors. (5) Lecture/screenings, five hours; discussion, one hour. In-depth study of specific film author (director or writer). P/NP or letter grading.

114. Film Genres. (5) Lecture/screenings, five hours; discussion, one hour. Study of specific film genre (e.g., Western, gangster,_blend genre, epic, comedy, social drama). P/NP or letter grading.

M117. Chicanos in Film/Video. (5) (Same as Chicana and Chicano Studies M114) Lecture/screenings, five hours; discussion, one hour. Goal is to gain nuanced understanding of Chicano cinema as political, socioeconomic, cultural, and aesthetic practice. Examination of representation of Mexican Americans and Chicanos in four Hollywood genres—silent greaser films, social problem films, Westerns, and gang films—that are major genres that account for films about or with Mexican Americans produced between 1930 and 1980. Exploration of Chicano-produced films that subvert or signify these Hollywood genres, including Zoot Suit, Ballad of Gregorio Cortez, and Born in East L.A. Consideration of sharper, more experimental and critical Hollywood image of Chicanos. Guest speakers include both pioneer and up-and-coming filmmakers. P/NP or letter grading.


222D. Film Editing: Overview of History, Technique, and Practice. (4) Lecture, three hours. Practical application of film editing techniques they have evolved, and continue to evolve. Examination of history of editing, as well as current editing trends, terminology, and workflow. P/NP or letter grading.

222E. Digital Cinematography. (4) Lecture, three hours. With lectures, screenings, and demonstrations, study of principles of digital cinematography. How tools and techniques affect visual storytelling process. Topics include formats, aspect ratios, cameras, lenses, special effects, internal menu picture manipu-
121. Writing for Animation Series. (5) Lecture, three hours. Introduction to craft and business of writing animation for television. Overview of history of animation, particularly for the medium, along with its many formats. Business model has changed radically over past five decades, as have types of shows that have been created. Designed to put students in historical perspective, with eye toward where industry is heading given changes in technology and continuing (and growing) scrutiny of outside forces such as corporations and FCC. Letter grading.

122J. Disney Feature: Then and Now. (5) Lecture, three hours; discussion, three hours. Study and analysis of Disney’s animated features have dominated until recently and ramifications of this dominance on animation and society. Letter grading.

122M. Film and Television Directing. (4) Lecture, three hours. Through discussions, screenings, demonstrations, and class presentations, students develop skills in directing for camera, working with actors, and producing in a digital medium. Topics include corequisite for graduate students enrolled in 122I. Writing for Animation Series. (5) Lecture, three hours; laboratory, three hours. Enforced requisite: course 122A or concurrent with course 122B. Letter grading.

122N. History of Animation in American Film and Television. (5) Lecture, six hours. Survey of art of animation in America from its precinema origins to recent films of Disney, Pixar, DreamWorks, Ghibli, and others. Place of animation in pop culture, racial imagery and ethnic stereotypes, growth of art form, and how it reflects American society. P/NP or letter grading.

M124. Sex, Race, and Difference in Transnational Film. (6) (Same as Gender Studies M124.) Lecture, three hours; discussion, one hour. Reading on feminist media studies, training of students in media literacy, and preparing them to be able to analyse texts. Enforced requisite: two hours. Enforced requisite: concurrent with course 122M. Letter grading.

125. Acting for Film and Television. (4) Studio, six hours. Projects in acting for television, video, and film. May be repeated twice for credit. P/NP or letter grading.


CM129. Contemporary Topics in Theater, Film, and Television. (2) (Same as Theater CM129.) Lecture, two hours; screenings, two hours. Limited to junior/senior and graduate theater/film and television students. Examination of creative process in theater, film, and television, with consideration of writing, direction, production, and performance. Overview of individual contributions to field; role of industry in creative process; examination of individual通过 complaining about effective thinking; examination of how industry is heading given changes in technology and continuing (and growing) scrutiny of outside forces such as corporations and FCC. Letter grading.

C132. Screenwriting Fundamentals. (2) Lecture, one hour. Corequisite for graduate students enrolled in course 431. Not open for credit to students with credit for course 33. Examination of screenwriting fundamentals: structure, character and scene development, conflict, locale, theme, history of drama. Review of authors such as Aristotle. Concurrently scheduled with course C430. P/NP or letter grading.


135A-135B-135C. Advanced Screenwriting Workshops. (6-8-9) Laboratory, three hours. Enforced requisite: course 133A and concurrent with 133B, which is requisite to 133C. For 133B and 133C: limited to Film and Television majors and designed for seniors. Courses in film and television writing. First act of original laboratory screenplay to be developed in course 135A, followed by second act in course 135B, and third act in course 135C. Letter grading.

140. Interactive Expression. (4) Lecture, six hours. Introduction to history and practice of interactive media, with emphasis on uniqueness of computer-mediated expression. Letter grading.

C142. Digital Imagery and Visualization. (4) Lecture, three hours; laboratory, three hours. Introductory hands-on investigation of techniques of digital still imaging and animation of digital image, in context of examining dynamics of cultural constructions and visual codes. Students conceive and produce several digital image visualizations. May be repeated once for credit. Concurrently scheduled with course C242. Letter grading.

C143. Moving Digital Image. (4) Lecture, three hours; laboratory, three hours. Investigation of different ways of creating and manipulating linear moving images (digital video) on desktop computers, exploring both creative and theoretical aspects of this production environment. Students conceive and produce number of short projects. Concurrently scheduled with course C243. Letter grading.

C144. Interactive Multimedia Authoring. (4) Lecture, three hours; laboratory, three hours. Introduction to expressive and aesthetic potential of interactive digital media and its theoretical issues. Exploration of methodologies and tools for media integration, interface design, and interactive audiovisual construction. Students conceive, produce, and master individual interactive multimedia projects. May be repeated once for credit. Concurrently scheduled with course C244. Letter grading.


C146. Art and Practice of Motion Picture Producing. (4) Lecture, three hours. Exploration of role of producer as both artist and business person. Comparative analysis of screenplays and completed films. Emphasis on assembly of creative team and analysis of industry context, both independent and studio. Screenings viewed outside of class and on reserve at Powell Library. Letter grading.


C148. Advanced Digital Media Workshop. (4) Laboratory, two hours; discussion, four hours. Designed for students with previous laboratory experience. Offer to provide opportunity to create larger-scale digital media works with advanced software tools and techniques in small process-oriented, creative workshop environment. May be repeated twice for credit. Concurrently scheduled with course C248. Letter grading.

151. Introduction to Experimental Filmmaking. (4) Lecture, three hours; laboratory; to be arranged. Limited to Film and Television majors. Techniques of image manipulation, design, and art direction. Production and completion of exercise (no longer than three minutes), using 16mm nonsound sound film. May be repeated twice for credit. Letter grading.

152. Film and Television Sound Recording. (4) Lecture, three hours; laboratory; to be arranged. Limited to Film and Television majors. Introduction to principles and technical problems of sound recording, including supervised exercises. P/NP or letter grading.

C152C. Digital Audio Postproduction. (4) Lecture, three hours; laboratory, three hours. Enforced requisite: courses 101A, 185. Limited to Film and Television majors. Introduction to principles and tools of editing used in visual storytelling, discussions, screenings, and screenings. Creative lighting techniques covering topics such as people, environment, spatial relationships, movement, color, special effects, and continuity. Letter grading.

154. Film Editing. (4) Lecture, three hours; laboratory, two hours. Enforced requisite: course 101A. Limited to Film and Television majors. Introduction to artistic and technical problems of film editing, with practical experience in editing of image and synchronous sound. Letter grading.

C154B. Advanced Film Editing. (4) Lecture, three hours; laboratory, one hour. Preparation: through coursework and experience in editing of image and synchronous sound. Enrolled by editor as part of a team of editors under the direction of another director. Enforced requisite: courses 154, 185. Limited to Film and Television majors in postproduction phase with advanced knowledge of organization and operation of postproduction process. Students may also propose to edit significant scene given to them by instructor. Concurrently scheduled with course C454B. Letter grading.

155. Introduction to Digital Media and Tools. (4) Lecture, three hours; laboratory, three hours. Enforced requisite: course 101A. Limited to Film and Television majors. Instruction and exercises in basic concepts and software of virtual production environments and digital postproduction process. Letter grading.

163. Directing Cameras. (4) Laboratory, three hours. Enforced requisite: course 101A. Limited to Film and Television majors. Investigation of expressive potential of image within and beyond narrative from directorial perspective. Exploring and creating visual involved with digital tools that stimulate visual creativity and positioning image as fundamental element of cinematic expression. Letter grading.

164. Directing Actors. (4) Laboratory, four hours. Exercises in analysis of script and character for purpose of directing actors. Emphasis on eliciting best possible performance from actors. May be repeated twice for credit. P/NP or letter grading.

C168. Creative Location Film Production. (8) Lecture, four hours; discussion, four hours; laboratory, to be arranged. Limited to directing or producer’s program students. Problems of location, production, direction, and performance. Discussion of cinematography in various real-life practical locations. Practical application of solving problems and communication within limitations of production experience. Concurrently scheduled with course C458. Letter grading.

175A-175B. Undergraduate Film Production. (8-4 to 8) Limited to Film and Television majors. 175A. Lecture, four hours; laboratory, eight hours. Enforced requisite: course 185. Course 175A is requisite to 175B. Writing, production, and production of short film. Letter grading. 175B. Lecture, three hours; laboratory, eight hours. Enforced requisite: course 175A. Completion
of postproduction (editing, creation of sound tracks) for short film began in course 175A. P/NP or letter grading.

M177. Film and Television Acting Workshop. (2) (Same as Theater M178.) Laboratory, four hours. Workshop experience in various aspects of film and television production. May be repeated for maximum of 12 units, but only 8 units may be applied toward Film and Television major. Letter grading.

181A. Introduction to Animation. (4) Lecture, three hours; laboratory, three hours. Drawing experience not required. Fundamentals of animation through preparation of short animated film. P/NP or letter grading.

181B. Writing for Animation. (4 or 8) Lecture, six hours; studio, to be arranged. Requisite: course 181A. Research and practice in creative writing and planning for animated film. May be repeated for maximum of 16 units. Limited to juniors and seniors. P/NP or letter grading.

181C. Animation Workshop. (4 or 8) Studio, six hours. Preparation: storyboard at first class meeting. Requisite: course 181A. Organization and integration of various creative arts used in animation to form complete animated works. May be repeated for maximum of 16 units. P/NP or letter grading.

183A. Producing I: Film and Television Development. (4) Lecture, three hours; discussion, one hour. Open to nonmajors. Critical understanding of strategies and techniques for evaluating screenplays and teleplays for the purpose of screenwriting and production. Letter grading.

183B. Producing II: Business and Finance. (4) Lecture, three hours; discussion, one hour. Open to nonmajors. Financial and operational strategies for film and video production companies. P/NP or letter grading.

183C. Producing III: Marketing, Distribution, and Exhibition. (4) Lecture, three hours; discussion, one hour. Open to nonmajors. Marketing and distribution of feature films, minidramas, and television programs. Critical understanding of exhibition platforms and subsequent reception and consumption by audiences. Focus on engagement between distributor, exhibitor, and audience and analysis of various conceptual frameworks and strategic practices within which these relationships are conceived and operate. May be taken independently for credit. Letter grading.

184B. Overview of Contemporary Television Industries. (4) Lecture, three hours. Examination of evolving economic structures and multiple exhibition practices in forms of temporary Hollywood television industry. With emphasis on operations of networks and cable companies, series development, marketing, and network branding from 1947 to present. Letter grading.

185. Intermediate Undergraduate Film Production. (6) Laboratory, six hours. Requisites: courses 52, 154, 155, 163. Limited to Film and Television majors. Instruction and exercises in all stages of film production. Letter grading.

186A. Introduction to Documentary Production. (4) Lecture, three hours; laboratory, three hours; fieldwork, four to six hours. Course 186A is enforced requisites: course 186B, which is enforced requisites: course 186C. Introductory viewing and discussion of selected documentaries and immediate viewing of preproduction exercises necessary to create video documentaries. Completion of series of exercises from conceptualization through postproduction, culminating in production of short documentary. Letter grading.

186B. Intermediate Documentary Production Workshop. (4) Lecture, three hours; laboratory, three hours; fieldwork, four to six hours. Enforced requisites: course 186A. Intermediate viewing of selected documentaries and instruction in various production skills necessary to create video documentaries. Completion of series of exercises from conceptualization through postproduction, culminating in production of short documentary. Letter grading.

186C. Advanced Documentary Production Workshop. (4) Lecture, three hours; laboratory, three hours; fieldwork, four to six hours. Enforced requisites: course 186B. Advanced viewing and discussion of selected documentaries and instruction in various production skills necessary to create video documentaries. Completion of series of exercises from conceptualization through postproduction, culminating in production of short documentary. Letter grading.

199. Directed Research or Senior Project in Film, Television, and Digital Media. (4) Seminar, three hours; laboratory, four to six hours. Designed for graduate students. Students supervised by faculty advisor and provide periodic report of their experience. May be repeated for credit. P/NP or letter grading.

200. Seminar: Research, Methods, and Resources. (8) Seminar, three hours; laboratory, four to six hours (additional screenings and/or video laboratory work as required). Designed for graduate students. Examination and study of research methods, techniques, and resources related to film and television research, including development of computer skills for preparation of bibliographies, online database searching, bibliographic retrieval and, when appropriate, use of computer/video equipment for research. Letter grading.

201A. Seminar: Media Industries and Cultures of Production—Foundation. (8) Seminar, three hours; film screenings, three to six hours. Critical survey of various scholarly traditions and methods (ethnographic, sociological, political-economic, geographic) that have been used to study film and television production practices as cultural phenomena, as basis for individual student research projects. Letter grading.

201B. Seminar: Media Industries and Cultures of Production—Transmedia. (8) Seminar, three hours; film screenings, three to six hours. Requisite: course 201A. Examination of contemporary production studies research and transmedia practices, including innovations in marketing, licensing, distribution, industrial organization, creative work, new technologies, and evolving relations between fans and producers in digital economy. Letter grading.

202. Seminar: Media Audiences and Cultures of Consumption. (6) Seminar, three hours; film screenings, three to six hours. Critical study of reception and use of television and electronic media and examination of theoretical approaches to cultural and audience research. Consideration of issues of cultural taste, consumerism, style/lifestyle, identity, and relationships between audience, industry, and mass-marketed images and commodities. Letter grading.

203. Seminar: Film and Other Arts. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Studies in interrelationships between film and fine arts, or performing arts, or literature, with emphasis on ways these other arts have influenced film. May be repeated twice for credit. S/U or letter grading.

204. Seminar: Visual Analysis. (6) Seminar, three hours; film screenings, two to four hours. Study of visual analysis (or textual criticism) of film and its access features, as approach to learning what makes film great and distinct art form. Exploration of role of visual style in narrative fiction filmmaking to attempt to understand some ways it can operate. Letter grading.

206A. Seminar: European Film History. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Studies in different periods of European cinemas or movements. Topics may include Italian neorealism, French film of 1930s, French New Wave and crime film, Weimar cinema, and Soviet cinema. Students prepare and present departmental listings for special topics. May be repeated twice for credit with topic change. Letter grading.

206B. Seminar: Selected Topics in American Film History. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Students in different periods of American cinema and movements. Topics may include gender, star, stardom, film noir, and popular culture. Departmental listings for special topics. May be repeated twice for credit with topic change. Letter grading.

206C. Seminar: American Film History. (6) Seminar, three hours; film screenings, four to six hours. Introduction to industrial, social, and aesthetic history of American film. Letter grading.

206D. Seminar: Silent Film. (6) Seminar, three hours; film screenings, two to four hours. Discussion of silent film from its beginning in 1895 to transition to sound cinema in 1927 to 1930. Focus on different terms of genre, national cinema, formal developments, and directors. Readings on film historical and theoretical issues. Letter grading.

207. Seminar: Experimental Film. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Studies of form, style, politics, and history of experimental, innovative, avant-garde, and minority film and video. Letter grading.

208A. Seminar: Film Structure. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Examination of various film conventions, both fictional and nonfictional, and of role of structure in motion picture. S/U or letter grading.

208B. Seminar: Classical Film Theory. (6) Seminar, three hours; film screenings, four hours. Study of principal topics and lines of inquiry that characterize theoretical writings of Arnheim, Eisenstein, Bazin, Krauss, etc. Letter grading.

208C. Seminar: Contemporary Film Theory. (6) Seminar, three hours; film screenings, four to six hours. Requisite: course 208B. Designed for graduate students. Study of redefinition of aims and methods of film theory through contemporary writings. S/U or letter grading.

209A. Seminar: Documentary Film. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Nonfictional film and its relation to contemporary culture. S/U or letter grading.
209S. Seminar: Animated Film. (6) Seminar, three hours; screenings, four hours. Designed for graduate students. Critical study of animated film: its historical development, structure, style, use, and relation to contemporary culture. S/U or letter grading.

211A. Seminar: Historiography. (6) Seminar, three hours; screenings/discussion, three hours. Limited to Film and Television MA candidates. Beginning examination of function and methods of writing film and television history as seen in works of key historians in U.S. and Europe. S/U or letter grading.

211B. Seminar: Historiography. (6) Seminar, three hours; film screenings, three hours. Limited to Film and Television PhD candidates. Examination of function and methods of writing film and television history as exemplified by key works in this tradition, with attention to central issues of historical thought on media. S/U or letter grading.

212. Cinema and Media Studies Graduate Colloquium. (2) Lecture, two hours. Exchange with scholars inside and outside department through lectures and academic paper presentation and offers students practice in presenting papers for professional conferences. "Off the writing seminars," film history/ interview preparation seminars, and discussion of current topics and trajectory of area of cinema and media studies. May be repeated for maximum of 14 units. S/U grading.

213. Capstone Seminar. (6) Seminar, three hours. Limited to Film and Television MA candidates. Capstone course for cinema and media studies master's program. Students write, revise, and present comprehensive essay on preapproved topic derived from their MA coursework. Letter grading.

215. Seminar: Theory and Method. (6) Seminar, three hours. Limited to Film and Television PhD candidates. Examination of major modes of theoretical reflection that bear on film and television through study of central texts of such traditions as phenomenology, auteurism, semiotics, psychoanalysis, sociology, etc. S/U or letter grading.

215B. Seminar: Text and Context in Intermedia Age. (6) Seminar/screenings, five hours. Theoretical and methodological approaches to media texts and contexts beginning with theories that located aesthetic, ideological, and cultural meanings in literary, theatrical, film, or television texts or group of texts to latter approaches from within material, social, and industrial contexts from which media texts emerge. Letter grading.

216. Film, Costume, and Character. (6) Seminar, three hours; film screenings, three hours. Exploration of integration of costume design into filmmaking process and illumination of work required to bring character to life. Discussion of practice of costume design. Analysis of films from various genres. Letter grading.

217A. Seminar: American Television History. (6) Seminar, three hours; screenings, four hours. Critical survey of U.S. television industry from its inception to present. Examination of programming and changes within industry by considering range of technological, economic, aesthetic, social, and cultural dimensions. Letter grading.

217B. Seminar: Selected Topics in Television History. (6) Seminar, three hours; screenings, three hours. Advanced critical seminar, with focus on specific topic or area (historical period, industry, programming, genre, or social formation) in domestic or international television. Letter grading.

218. Seminar: Culture, Media, and Society. (6) Seminar, three hours; screenings/discussion, four hours. Central tenets and analysis of other(s). Thematization of other is concerned with theories of difference rather than similarity or identity—with how other cultures enter into politics of representation and re- nounced others. (1) Heteronomy versus autonomy, (2) hierarchy versus opposition, (2) heterogeneity without hierarchy, and (3) otherness without ethniccenterism. Examination of how women, national minorities, and Third World peoples have been rendered others; place of cinematic apparatus in this process and how academization of film is practiced vis-à-vis mainstream critical discourse. Letter grading.

219. Seminar: Film and Society. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Study of ways film affects and is affected by social systems. Themes considered in relation to role of media in society. May be repeated once for credit. S/U or letter grading.

220. Seminar: Television and Society. (6) Seminar, four hours; screenings/discussion, three hours. Designed for graduate students. Study of ways television forms affect and are affected by social behavior, belief, and value systems; study of technological and economic determinants of television production. May be repeated once for credit. S/U or letter grading.

221. Seminar: Film Authors. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Intensive examination of works of outstanding creators of films. May be repeated twice for credit. S/U or letter grading.

222. Seminar: Film Genres. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Studies of patterns, styles, and themes of such genres as noir, war, science fiction, comedy, etc. May be repeated twice for credit. S/U or letter grading.

223. Seminar: Visual Perception. (6) Seminar, three hours; screenings/discussion. Aesthetic, psychological, physiological, and phenomenological approaches to vision as they relate to ways in which viewers experience and see film, television, and digital media. Letter grading. May be repeated twice for credit. S/U or letter grading.

224. Computer Applications for Film Study. (6) Lecture, three hours; film screenings, three hours. Survey of computer applications relevant to film study, principally computer- videodisc systems and image capture technology. S/U or letter grading.

225. Seminar: Videogame Theory. (6) Seminar, three hours; laboratory, three hours. Videogame theory, with exploration of nature of medium, rather than looking at history, industrial practice, social effects, or any other of many interesting questions that games also raise. Acknowledgment of roots in film, television, and media studies and investigation of emerging videogame field. S/U or letter grading.

CM229. Contemporary Topics in Theater, Film, and Television. (2) Same as Theater CM229. Lecture, two hours; screenings, two hours. Limited to junior and senior graduate/film and television students. Examination of creative process in theater, film, and television, with consideration of writing, direction, production, and performance. Overview of individual contributions in collaborative effort; examination of diversity of approaches to different types of media production. Individual units include participation of leading members of theater, film, and television professions. May be repeated twice for credit. Concurrently scheduled with course CM129. S/U or letter grading.

C242. Digital Imagery and Visualization. (4) Lecture, three hours; laboratory, three hours. Introductory hands-on investigation of techniques of digital still imaging and aesthetics of digital image, in context of examining dynamic of cultural constructions and visual codes. Students conceive and produce several digital image visualizations. May be repeated once for credit. Concurrently scheduled with course CM129. S/U or letter grading.

C243. Moving Digital Image. (4) Lecture, three hours; laboratory, three hours. Investigation of different ways of creating and manipulating linear moving images (digital video) on desktop computers, exploring the use of digital imaging and video as part of this production environment. Students conceive and produce number of short projects. Concurrently scheduled with course C143. Letter grading.

C244. Interactive Media. (4) Lecture, three hours; laboratory, three hours. Introduction to expressive and aesthetic potential of interactive digital media and its theoretical issues. Exploration of methodologies of production, integration, interface design, and interactive audiovisual construction. Students conceive, produce, and master individual interactive multimedia projects. May be repeated once for credit. Concurrently scheduled with course C144. Letter grading.

C245. Creative Authoring for World Wide Web. (4) Lecture, three hours; laboratory, three hours. Examination of creative aspects of World Wide Web as medium for authoring. Students produce Web works and serve them online. Contextualization of medium by looking at its history, embedded ideology, and sociopolitical consequences. May be repeated once for credit. Concurrently scheduled with course C145. Letter grading.


C248. Advanced Digital Media Workgroup. (4) Laboratory, four hours. Designed for graduate students. Study of key aesthetic questions of analysis and evaluation in relation to central works of motion picture criticism. May be repeated once for credit. S/U or letter grading.

270. Seminar: Film Criticism. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Study of key aesthetic questions of analysis and evaluation in relation to central works of motion picture criticism. May be repeated once for credit. S/U or letter grading.

271. Seminar: Television Criticism. (6) Seminar, four hours; screenings/discussion, three hours. Designed for graduate students. Analysis of major forms of television production and criticism it has elicited. May be repeated once for credit. S/U or letter grading.

273. Seminar: Contemporary Film and Television Criticism. (6) Seminar, three hours; film and television screenings, four to six hours. Limited to Film and Television MA candidates. Concurrently scheduled with course CM148. Double counting of analytic and critical response, with emphasis on contemporary film and television. S/U or letter grading.

274. Seminar: Research Design. (6) Seminar, three hours; screenings/discussion, four hours. Designed for graduate students. Analysis of narrative form and television production and criticism it has elicited. May be repeated once for credit. S/U or letter grading.


282A. TV Development 1. (4) Seminar, three hours. Basic tenets and analysis of television scripted shows and contemporary television production and business practices. Development of original show concepts and pitch for review and feedback by class, instructor, and guests. Letter grading.

282B. TV Development 2. (4) Seminar, three hours. Advanced analysis of television scripted shows and contemporary industry production and business practices. Continued development of original show concepts and series proposals for review and feedback by class, instructor, and guests. Letter grading.
283A. Writing Half-Hour Comedy Speculative Episode. (4) Seminar, three hours. Basic tenets and analysis of television comedy shows and contemporary industry production and business practices. Students write speculative episode for existing half-hour comedy series. Letter grading.

283B. Writing Television Comedy Scripts. (8) Seminar, three hours. Enforced prerequisite: course 283A. Examination of basics of half-hour pilot format, style, and content analysis, and development principles behind network needs and choices in choosing pilots. Forum in which to discuss ideas and issues with class and instructor. Weekly progress on original half-hour pilot and series bible required. Letter grading.

283C. Running Television Drama Room. (4) Seminar, three hours. Enforced prerequisite: course 283A. Practical knowledge about skills necessary to be writer/executive producer of one-hour drama show. Focus on story development, collaboration, and leadership skills needed to successfully function in writers’ room, as well as breaking stories, writing, and rewriting television scripts. Letter grading.

284A. Writing One-Hour Drama Speculative Episode. (4) Seminar, three hours. Basic tenets of television drama shows and contemporary industry production and business practices. Students write speculative episode for existing one-hour drama series. Letter grading.

284B. Writing Television Drama Scripts. (8) Seminar, three hours. Enforced prerequisite: course 284A. Examination of basics of drama pilot format, style, and content analysis, and development principles behind network needs and choices in choosing pilots. Forum in which to discuss ideas and issues with class and instructor. Weekly progress on original drama pilot and series bible required. Letter grading.

284C. Running Television Drama Room. (4) Seminar, three hours. Enforced prerequisite: course 284A. Practical knowledge about skills necessary to be writer/executive producer of one-hour drama show. Focus on story development, collaboration, and leadership skills needed to successfully function in writers’ room, as well as breaking stories, writing, and rewriting television scripts. Letter grading.

287A. Introduction to Art and Business of Producing I. (4) Seminar, three hours. Introduction for first-year producers program students to producer’s role in navigating unique dynamic between art and commerce in entertainment industry. Overview of development, production, distribution, and exhibition of independent and feature films for worldwide theatrical market, including identifying material, attracting elements, and understanding basics of studio and independent financing and distribution. Minimum of two unproduced screenplays to be presented for review by class and instructor to begin identifying potential thesis projects. S/U or letter grading.

287B. Introduction to Art and Business of Producing II. (4) Seminar, three hours. Requisite: course 287A. Builds on principles taught in course 287A and presents continuation of study of development, production, and distribution of feature films for worldwide theatrical market, including identifying material, attracting talent elements, and understanding basics of studio and independent financing and distribution. Minimum of two unproduced screenplays to be presented for review by class and instructor to begin identifying potential thesis projects. S/U or letter grading.

290A. Research and Development I. (4) Seminar, three hours. Forum for roundtable strategy sessions and mock story meetings with instructor, students, and various industry guests. Development of one story idea for thesis project. S/U or letter grading.

290B. Research and Development II. (4) Seminar, three hours. Special strategy sessions and mock story meetings. Students must make concrete weekly progress on thesis project and adapt strategy based on feedback received. Development of marketing and business strategies for story idea set up in course 290A. S/U or letter grading.

290C. Research and Development III. (4) Seminar, three hours. Final stages of thesis preparation for evaluation. Guidance provided by instructor on how to effectively present thesis project. Rehearsals include industry-related book reports, script analysis, pitching selected concept, weekly research to understand marketplace, accumulation and updating of data, and individual critiques comprised of industry professionals. S/U or letter grading.

291A. Studios versus Independents: Navigation of Current Status of Financing/Production/Distribution of Feature Films. (4) Lecture, three hours. Course 291A is not requisite to 291B. Lecture, three hours. Course 291B is not requisite to 291B. Examination of current status of financing/production/distribution of independent films and studio films. Topics include film finance, production, distribution, marketing, and legal. S/U or letter grading.

291B. Feature Film Marketing. (4) Lecture, three hours. Course 291B is not requisite to 291C. Examination of numerous groups that are responsible for specific marketing components and make up marketing departments. Distribution and in-theater marketing, trailers, public promotions, research, and media. Mechanics and levels of intuition required to make sure movies are seen by public. S/U or letter grading.

291C. Feature Film Distribution and Exhibition. (4) Lecture, three hours. Course 291B is not requisite to 291C. Investigation of philosophy, structure, and major players that make up entertainment industry, with emphasis on film distribution and exhibition. Theatrical exhibition, cable, pay-per-view, direct marketing, and video store. Analysis of different forms of representation offered by major players, including pay-per-view, in-theater marketing, studio, and independent producers. S/U or letter grading.

291D. International Financing and Distribution. (4) Lecture, three hours. Course 291B is not requisite to 291D. Exploration of role of writers-producers or showrunners in creating television shows. Designed to train writers who typically enter field as staff writers and to develop concrete tools of producers. Training of next generation of nonwriting network and studio development executives whose job it is to assist writers producers in highly collaborative process of creating, developing, producing, and scheduling television programming. S/U or letter grading.

292A. Overview of Network Television Management. (4) Lecture, three hours. Designed to expand basic understanding of network and cable television business. Exploration of role of showrunner, executive producers, and studio producers in development and creating programming. S/U or letter grading.


292C. Running Shows: Producing for Broadcast and Cable. (4) Lecture, three hours. Course 292B is not requisite to 292C. Exploration of role of writers-producers or showrunners in creating television shows. Designed to train writers who typically enter field as staff writers and to develop concrete tools of producers. Training of next generation of nonwriting network and studio development executives whose job it is to assist writers producers in highly collaborative process of creating, developing, producing, and scheduling television programming. S/U or letter grading.

294A. Contracts and Negotiation. (4) Lecture, three hours. Course 294B is not requisite to 294C. Legal-based course dealing with independent finance and distribution of feature films. Topics include fundamentals of film financing, domestic distribution, international distribution, European coproductions, role of foreign sales agents and of bankers and completion bond companies. S/U or letter grading.

294B. Research and Development II. (4) Lecture, three hours. Course 294B is not requisite to 294C. Legal-based course dealing with independent finance and distribution of feature films. Topics include fundamentals of film financing, domestic distribution, international distribution, European coproductions, role of foreign sales agents and of bankers and completion bond companies. S/U or letter grading.

294C. International Financing and Distribution. (4) Lecture, three hours. Course 294B is not requisite to 294C. Legal-based course dealing with independent finance and distribution of feature films. Topics include fundamentals of film financing, domestic distribution, international distribution, European coproductions, role of foreign sales agents and of bankers and completion bond companies. S/U or letter grading.

295A. Art of Presentation. (4) Lecture, three hours. Cultivation of skills needed for students to present themselves and their project goals with clarity and precision to industry professionals. Oral presentations designed to enhance student ability to deliver convincing arguments on range of topics. S/U or letter grading.

295B. Advanced Film and Television Producing Workshop for Producers, Writers, and Directors. (4) Lecture, three hours. Course 295A is not requisite to 295B. Designed to help students as well as staff writers and directors, focus on networking opportunities and to develop strategies to bring their feature and television projects to marketplace. Case-study documents (drafts of screenplays, dailies, etc.) from current or recently produced projects provided. S/U or letter grading.

295C. Advanced Producing: Role of Successful Producer. (4) Lecture, three hours. Designed to provide producers with comprehensive understanding of business acumen involved in purchasing scripts for studios and independent production companies. Through script analysis and discussion, students are encouraged to examine not just story elements, but marketing assets inherent in pieces of material. S/U or letter grading.

296A. Role of Talent Agencies. (4) Lecture, three hours. Introductory overview of various departments at agencies, including motion picture literary, talent, story, packaging, and television, and examination of various interactions among them. Exercises encourage understanding of how talent agencies operate and how to effectively work with clients at talent agencies. S/U or letter grading.

296B. Who Represents Me? (4) Lecture, three hours. Course 296A is not requisite to 296B. In-depth analysis of different forms of representation offered by agents, managers, business managers, and lawyers and detail of legal rights and responsibilities of each. Exercises require students to represent rights holders in series of potential projects. S/U or letter grading.
297A. Digital Media Producing 1, (4) Seminar, three hours. Overview of changing world of storytelling through development of new technologies and new media. Conceptualization and pitch of innovative, original, digital media concepts with interactive or participatory storytelling elements for review and feedback by class, instructor, and guests. S/U or letter grading.


297C. Digital Media Producing 3, (4) Seminar, three hours. Focus on visual and storytelling world of digital image in sound stage and at exterior locations that explore conflict, locale, theme, history of drama. Review of film scriptwriting. S/U or letter grading.

298A. Special Studies in Film and Television. (2 to 6) Seminar, three hours; film screenings, three hours. Designed for graduate students. Seminar study of problems of film and television, organization basis. May be repeated once for credit. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel, teaching assistant, assistant professor, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

400. Film Image Design Laboratory. (4) Lecture, two hours; laboratory, six hours. Limited to graduate film and television students. Conception and design of story and subject matter for film. One- to two-minute experiments in relation of meaning to theme, including manipulation of optics, photography, elements of electronic processes, and display of time and motion. May be repeated once for credit. S/U or letter grading.

401. Film Analysis for Filmmakers. (4) Lecture/ screenings, five hours. Limited to graduate film and television students. Drawing heavily from array of historical examples, examination of many expressive strategies useful in creation of moving image art forms. Unifying theory and practice, presentation of approach to viewing great films of past that empower filmmakers to use sound and images to tell original stories in present. Focus on strategic decision making in areas of writing, design, cinematography, editing, sound, and performance to enable filmmakers to discover their own personal style for telling stories on screen. Letter grading.

402A-402B. Advanced Narrative Directing Workshops. (4 or 8, 5) Limited to nine graduate film and television students. Production of 10- to 15-minute fiction film or project. Letter grading. 402A. Laboratory, six or 12 hours; fieldwork, to be arranged. Requisites: courses 405, 409, 410A, 410B, 410C, 433. Students must complete and produce their projects by end of first term. 402B. Laboratory, 12 hours; fieldwork, to be arranged. Requisite: course 402A. In second term students must complete photography on location and/or in studio.


403A–403B–403C. Advanced Documentary Workshops. (4 to 8, 5) Lecture/discussion/laboratory, 12 to 24 hours; fieldwork, to be arranged. Requisites: courses 405, 409, 410A, 410B, 410C. Limited to graduate film and television students. Production of advanced individual documentary film or multimedia projects. Students conceptualize, research, write, shoot (on location), and edit projects to completion. May be repeated once for credit. S/U or letter grading.

404A. Advanced Abstract/Experimental Media Workshop. (8 to 12) Lecture/discussion/laboratory, 12 hours; fieldwork, to be arranged. Requisites: courses 405, 409, 410A, 410B, 410C, 433. Limited to 10 students per section. Production of 20-minute abstract or experimental film, video, or multimedia project. Students plan, design, and shoot their projects in first term and work as crew for each other in rotating assignments. In second term students must complete complete postproduction of their projects. S/U or letter grading.

404C. Advanced Abstract/Experimental Media Workshop. (8) Lecture/discussion/laboratory, 12 hours; fieldwork, to be arranged. Requisites: courses 404A, 404B. Completion of all stages of production and postproduction on projects started in courses 404A and 404B. Letter grading.

407. Video Documentary Workshop. (8) Laboratory, six hours; fieldwork, to be arranged. Preparation: Apprentice per- sonnel, teaching assistant, assistant professor, or fellow. Preparation: Apprentice personnel, teaching assistant, assistant professor, or fellow. Preparation: Apprentice personnel, teaching assistant, assistant professor, or fellow.

408A–408B. Avid Editing. (4–4) Studio, four hours; laboratory, to be arranged. Individual instruction in Avid nonlinear editing system. S/U or letter grading.

409. Directing Actors for Camera Workshop. (4) Workshop, six hours; laboratory, to be arranged; labo- ratory preparation, two to four hours. Limited to MFA production program students. Team-taught with five weeks dedicated to giving director/actor/television direct- niques, and five weeks to offer basic strategies to elicit good performances from actors. Emphasis on problems faced when directing actors for film. S/U or letter grading.

410A. Symposium. (2) Seminar, three hours. Limited to and required of first-year MFA production program students. Exploration of principal concepts of film and television production within context of preproduction, production, and postproduction, providing forum for synthesis of knowledge gained in various first-year technical craft courses. Exploration of strategies for enhancing cross-disciplinary environment. May be repeated for credit. Letter grading.

410B. Cinematography. (2) Seminar, three hours. Limited to and required of first-year MFA production program students. Production workshop designed to give hands-on experience in all aspects of film pro- duction (tools and practicum of medium) as each stu- dent writes/directs/edits six-minute film. May be re- peated for credit. Letter grading.

410C. Postproduction. (2) Seminar, three hours. Limited to and required of first-year MFA production program students. Production workshop designed to give hands-on experience in all aspects of film pro- duction (tools and practicum of medium) as each stu- dent writes/directs/edits six-minute film. May be re- peated for credit. Letter grading.

410D. Postproduction Sound. (2) Seminar, three hours. Requisites: courses 405, 409. Limited to and required of first-year MFA production program stu- dents. Technical and aesthetic aspects of postpro- duction sound recording, editing, and rerecording for film and television. Application of principles of sound design to student films while using UCLA’s John Candy Room and Scoring Stage for Automatic Dia- logue Replacement (ADR), Foley, and mixing. Use of Pro Tools LE for recording, editing, mixing, and selection and use of microphones and mixing consoles, and incorporation of Final Cut Pro soundtracks into mix environment. Students record ADR and Foley and present mix of edited dialogue/ADR, Foley, sfx, and music tracks by end of term. Letter grading.

410E. Production. (12) Lecture, three hours; field- work, 24 to 40 hours. Requisites: courses 401, 409, 410A through 410D. Limited to and required of first- year MFA production/directing students. Designed to give hands-on experience in film production. Stud- ents prepare and direct six-minute films and serve in preassigned crew positions for each other. Letter grading.

417. Lighting for Film and Television. (4) Lecture, two hours; laboratory, six hours. Limited to graduate film and television students. Lectures, supervised ex- emporium stage in a variety of scenes, and discussions aimed at learning to master lighting to create appropriate mood or atmosphere of pre- mediated scene recorded on film or through electron- ical system. May be repeated twice for credit. Letter grading.

418. Cinematography and Directing. (4) Lecture, two hours; laboratory, six hours. Requisite: course 410A and 410B. Limited to and required of first-year MFA students. Supervised filming of short dramatic projects on sound stage and at exterior locations that explore complexity of process, emphasizing balance and col- laboration essential to both directing and photog- raphy in its varied technical, production, and creative aspects. Letter grading.

419. Advanced Cinematography. (4) Lecture, two hours; discussion, one hour; laboratory, one hour. Requisites: courses 417, 418. Limited to graduate film and television students. Advanced study of principles of cinematography, with emphasis on exposure, lighting, and selection of film, camera, and lenses. S/U or letter grading.


423B. Advanced Direction of Actors for Film and Television. (4) Studio laboratory, six hours. Requi- site: course 423A. Limited to graduate film and tele- vision students. Advanced study and practice of di- recting actors before camera. Emphasis on develop- ing techniques to immediately enhance communication between director and actor on set in order to maintain continuity from shot to shot. S/U or letter grading.

424. Introduction to Film and Television Screen- writing. (4) Lecture, three hours. Limited to graduate film and television students. Introductory course in problems of film and television screenwriting. S/U or letter grading.

429A. Screenwriting Fundamentals. (2) Lecture, one hour. Corequisite for graduate students enrolled in course 431. Examination of screenwriting funda- mentals: structure, character development, conflict, locale, theme, history of drama. Review of authors such as Aristotle. Concurrently scheduled with course C122. S/U or letter grading.

431. Introduction to Film and Television Screen- writing. (4) Lecture, three hours. Limited to graduate film and television students. Introductory course in problems of film and television screenwriting. S/U or letter grading.

433. Writing Short Screenplays. (4) Lecture, three hours. Limited to and required of first-year MFA pro- duction program students. Conception, development, and writing of six-minute dramatic film script to be produced in courses 410A, 410B, 410C. Letter grading.


435. Advanced Writing for Short Film and Televi- sion Screenplays. (4) Discussion, three hours. Req- uest: course 410C. Limited to graduate film and tele- vision students. Conception, development, and writing of dramatic film script to be produced as ad- vanced or thesis project. Letter grading.

436. Advanced Storytelling Tools for Screenwrit- ers: Study and Practice. (4) Lecture, three hours. Recommended requisite: course C430 or 431. In- struction in identification and application of special-
ized narrative tools common to screenplays. Students view and analyze well-known films that employ these devices to significant and enduring effect. Students also read screenplays (or portions thereof) of these films to analyze how screenwriters convey each device in written form. Students write original scripts and/or synopses that demonstrate their practical mastery of these tools as they relate to their own development as screenwriters. S/U or letter grading.


452C. Digital Audio Postproduction. (4) Lecture, three hours; laboratory, three hours. Limited to Film and Television majors. Through discussion, demonstrations, and laboratory assignments, exploration of digital audio tools and procedures available to today's filmmakers. Coverage of many technical, equipment, and software issues, with emphasis on creative process. Concurrently scheduled with course C152C. Letter grading.

453. Postproduction Sound Design. (2 to 4) Lecture, three hours. Designed to give film students insight into concert sound and to provide knowledge and tools necessary to complete postwork on their projects. Exploration of all areas of postproduction sound design from editing to final mixing. How to use sound design to enhance storytelling capabilities of films, evaluate music choices, pick composer, music edit, create sound design to enhance story points, discover design opportunities, and select right sound. How to edit dialogue, prep for Automatic Dialogue Replacement and Foley sessions, and supervise final sound mix. Screening of numerous films to provide examples of postsound choices that demonstrate effective use of sound design. S/U or letter grading.

454B. Advanced Film Editing. (4) Lecture, three hours; laboratory, one hour. Preparation: submission of rough cut of existing project or proposal to edit work of another director. Limited to film and television students in postproduction phase with advanced knowledge of organization and operation of postproduction process. Preparation to effectively use sound design to enhance storytelling capabilities of films, evaluate music choices, pick composer, music edit, create sound design to enhance story points, discover design opportunities, and select right sound. How to edit dialogue, prep for Automatic Dialogue Replacement and Foley sessions, and supervise final sound mix. Screening of numerous films to provide examples of postsound choices that demonstrate effective use of sound design. S/U or letter grading.

454C. Digital Workflow. (2 to 4) Lecture, three hours; laboratory, two hours. Limited to departmental majors. Theory and demonstrations, side speakers, and laboratory assignments, demystification of ever-changing world of digital workflow. Students plan, schedule, and budget their overall workflow in production. May be repeated once for credit. Letter grading.

459A-459B. Directing for Film and Television. (4-4) Lecture, three hours; laboratory, six hours; laboratory, four hours. Preparation: courses 181A, 181B, 181C. Directed study to be arranged. Limited to graduate students. Directed advanced study and practice in animation to form completed project of selected interest. May be repeated for maximum of 16 units. S/U or letter grading.

460A-460B. Advanced Film Directing. (8-8) Studio, to be arranged. Limited to graduate film and television students. Special problems in direction of fictional and documentary films. S/U or letter grading.


468E. Creative Location Film Production. (8) Lecture, four hours; discussion, four hours; laboratory, to be arranged. Directed study to be arranged. Limited to graduate film and television students. Problems of location, production, directing, and cinematography in various real-life practical locations. Practical application of solving problems of location, production, and communication within limitations of production experience. Concurrently scheduled with course C168. Letter grading.

472. Commercials. (4) Lecture, four hours. Limited to MFA students. Designed to give students opportunity to explore one very specific kind of filmmaking. Through exploration of advertising, students gain knowledge about what kind of work is salable in American commercials and how best to position their work within its distinct confines of commercial genre. Letter grading.

480. Timing for Animation. (4) Lecture, three hours; laboratory, three hours. Process of animation timing through attitudes and assignments. Letter grading.

482A-482B. Advanced Animation Workshops. (4 or 8 each) Lecture, three hours; studio, to be arranged. Requisites: courses 181A, 181B, 181C. Advanced organization and integration of various creative arts used in animation, both in production of complete animated film. May be repeated for maximum of 16 units. S/U or letter grading.

483A-483B-483C. Advanced Computer Animation. (4 to 8 each) Lecture, six hours; laboratory, four hours. Requisites: courses 181A, 181C, 482A. Recommended: course 181B. Course 483A is requisite to 483B, which is requisite to 483C. Creation and production of complete and original advanced computer animated film. Letter grading.

484A-484B. Visual Thinking and Organization for Animation. (4-4) Lecture, six hours; laboratory, four hours. Course 484A is requisite to 484B. Systematic approach to the study of composition, two-dimen sional and three-dimensional form and applying traditional compositional approaches to animation. May be repeated for maximum of 16 units. Letter grading.

485. Legal Issues in Animation. (4) Lecture, three hours; laboratory, three hours. Examination of legal issues in animation, including copyright, contracts, constitutional issues in animation, competing rights, employer/employee relationships, and representation in animation. S/U or letter grading.

486. Directed Individual Study: Preparation to Advancement to Candidacy for MFA in Production. (2 to 4) Tutorial, four to eight hours. Limited to MFA production program students. Specialized development and organization of proposed thesis project prior to advancement to candidacy. Should be taken term before student plans to advance to candidacy. S/U or letter grading.

487. Directed Individual Study: Postproduction Laboratory. (4) Laboratory, eight hours. Limited to MFA production program students. Completion of projects in final stage of postproduction. May not be repeated. S/U or letter grading.

488A. Interactive Animation. (4 to 8) Lecture, six hours; laboratory, to be arranged. Requisites: courses 181A, 181C, 489A. Organization and integration of various creative arts used in animation and interactive media to form complete story of selective interactive animation project. May be repeated for maximum of 16 units. Letter grading.

488B. Advanced Interactive Animation. (4 to 8) Lecture, six hours; laboratory, to be arranged. Requisite: course 488A. Organization and integration of various creative arts used in animation and interactive media to form complete story of selective interactive animation project. May be repeated for maximum of 16 units. Letter grading.

489A. Computer Animation in Film and Video. (4 to 8) Lecture, six hours; laboratory, four to eight hours; other, to be arranged. Preparation: complete animated film. Requisites: courses 181A, 181C. Instruction in and supervised production of computer animation. May be repeated for maximum of 16 units. Letter grading.

489B. Production in Computer Animation. (4 to 8) Lecture, six hours; laboratory, four to eight hours. Requisite: course 489A. Instruction in creation, preparation, and production of complete and original computer animation film or tape. May be repeated for maximum of 16 units. Letter grading.

495A. Practice of Teaching Film and Television. (2) Seminar, three hours. Required of all teaching assistants and associates in critical studies program. Orientation and preparation of graduate students who have responsibility to assist in teaching undergraduate courses in department; discussion of problems common to teaching experience. S/U grading.

496. Practice of Teaching Film and Television. (2) Discussion, two hours. Required once of all teaching assistants and associates in department. Orientation and preparation of graduate students who have responsibility to assist in teaching undergraduate courses in department; discussion of problems common to teaching experience. May not be applied toward MA, MFA, or PhD. May be repeated. S/U grading.

498. Professional Internship in Film and Television. (4, 8, or 12) Tutorial, to be arranged. Full- or part-time at studio or in professional project. Designed for MFA program advanced students. Internship at various film, television, or theater facilities accentuating creative contribution, organization, and work of professionals in their various specialties. Given only when projects can be scheduled. S/U or letter grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of graduate adviser and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596A. Directed Individual Studies: Research. (2 to 12) Tutorial, to be arranged. Limited to graduate students. May be repeated with consent of instructor. S/U or letter grading.

596B. Directed Individual Studies: Writing. (2 to 12) Tutorial, to be arranged. Limited to graduate students. May be repeated with consent of instructor. S/U or letter grading.

596C. Directed Individual Studies: Directing. (2 to 12) Tutorial, to be arranged. Limited to graduate students. May be repeated with consent of instructor. S/U or letter grading.

596F. Directed Individual Studies: Production. (2 to 12) Tutorial, to be arranged. Limited to graduate students. May be repeated with consent of instructor. S/U or letter grading.

597. Preparation for PhD Qualifying Examinations in Film and Television. (2 to 12) Tutorial, to be arranged. May be taken for maximum of 12 units. S/U grading.


**Food Studies**

**Interdisciplinary Minor**

**College of Letters and Science**

A316 Murphy Hall
Box 951571
Los Angeles, CA 90095-1571
310-206-1698
srahimza@college.ucla.edu
http://www.ucla.edu/foodstudies/minor.htm

Joseph F. Nagy, PhD, Chair

**Faculty Committee**

Allison B. Carruth, PhD (English, Environment and Sustainability, Society and Genetics)
Barbara Drucker, MFA (Art)
Akhil Gupta, PhD (Anthropology)
Joseph F. Nagy, PhD (English)
Janet M. O’Shea, PhD (World Arts and Cultures/ Dance)
Scope and Objectives

The Food Studies minor uses food—its production, preparation, sharing, consumption, and disposal—as a lens for understanding individual, sociocultural, and global issues. The study of the role of food in multiple complex aspects of life builds bridges across all areas of the academy, including arts, anthropology, environment and sustainability, folklore and mythology, geography, history, humanities, law, psychology, public health, public policy, and other fields.

Through interdisciplinary courses and a capstone experience, students in the minor acquire a unique insight of food studies and emerge with a new intellectual framework for understanding this expanding area of study.

Undergraduate Study

Food Studies Minor

To be eligible for the Food Studies minor, students must be in good academic standing (have an overall grade-point average of 2.0 or better) and be enrolled in one of the required lower-division courses for the minor. To apply, students must file a petition with College Academic Counseling, A316 Murphy Hall.

Required Lower-Division Courses (10 or 11 units): Environment 25 or Clusters M1CW, and one course from Community Health Sciences 48, Italian 42C, or Physiological Science 7.

Required Elective Courses (20 or 21 units): Four courses from Anthropology 133, Chinese 185, Civic Engagement 170SL, Community Health Sciences 130, 131, 132, English 112E, M118F, Food Studies 197, Italian 124, Physiological Science 7.

Required Capstone Course (4 units): Food Studies 195CE or 199. The capstone requirement provides students the opportunity to either put their studies into practice through internship or complete independent research in a food-related area of interest. The capstone course is required for completion of the minor. It must be the last course completed for the minor, after all other courses have been completed or concurrently with one remaining course requirement.

To remain eligible for the minor, students must earn a minimum grade of C in Environment 25 or General Education Cluster M1CW.

No more than two lower-division courses may be applied toward the minor. Students may petition to have courses other than those listed above under the required elective courses be applied toward the minor. Contact the academic counselor for the Food Studies minor for information on how to petition.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Food Studies

Lower-Division Course

27. Critical Thinking about Food and Science Publications. (5) Lecture, four hours. Development of process of further thinking about stories behind conclusions from nutrition studies and food scientific literature. Exercises, discussions, reports, and readings designed to provide practices to become critical thinker in food science and literature. P/NP or letter grading.

Upper-Division Courses

187. Special Topics in Food Studies. (4) Lecture, three hours. Variable topics in one area within food studies. May be repeated for credit with topic and/or instructor change. P/NP or letter grading.
195CE. Community and Corporate Internships in Food Studies. (4) Tutorial, to be arranged: fieldwork, eight to 10 hours. Limited to juniors/seniors. Internship in corporate, governmental, or nonprofit setting coordinated through Center for Community Learning (CCL). Students complete weekly written assignments, attend bimonthly meetings with graduate student coordinator, and write final research paper. Faculty sponsor and graduate student coordinator construct series of reading assignments that examine issues related to internship site. Meets for credit approved by Center for Community Learning. Individual contract with site supervisor, CCL coordinator, and faculty sponsor required. P/NP or letter grading.

197. Individual Studies in Foodways, Diet, and Nutrition. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Individual intensive study, with scheduled meetings between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research or Senior Project in Food Studies. (4) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research projects in food studies under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Course

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation; apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

FOREIGN LITERATURE IN TRANSLATION

Scope and Objectives

The following courses offered in the departments of language and literature do not require reading knowledge of any foreign language.
Dutch (Germanic Languages)
10. Contemporary Dutch Society and Culture: Beyond Rembrandt, Cheese, and Wooden Shoes
113. Modern Dutch and Flemish Literature in Translation

English (English)
111A. Hebrew Bible in Translation
111B. Christian Biblical Texts in Translation
111C. Topics in Biblical Literature
112A. Oral Tradition
112B. Celtic Mythology
112C. Survey of Medieval Celtic Literature
112D. Celtic Folklore

French (French and Francophone Studies)
112. Medieval Foundations of European Civilization
M140. Women's Studies in French Literature
160. Francophone Cultures in English
161. French and Francophone Theater in Translation
163. French and Francophone Short Story in Translation
164. French and Francophone Novel in Translation
166. French and Francophone Autobiography in Translation
167. French and Francophone Intellectual History in Translation
171. Medieval Flix
172. Francophone Cinema and Literature in Translation
191A. Variable Topics Research Seminars in Translation

German (Germanic Languages)
50A-50B. Great Works of German Literature in Translation
56. Figures Who Changed World
57. Hollywood and Germany
58. Knights and Ladies, Sex and Power at Medieval Court
59. Holocaust in Film and Literature
60W. War
61A-61D. Modern Metropolis
M70. Origin of Language
102. War, Politics, Art
103, 104. German Film in Cultural Context
M105. Tristan, Isolde, and History of Heterosexuality
109. Jewish Question and German Thought
110. Special Topics in Modern Literature and Culture
111. Thomas Mann, Hesse, Böll, and Grass: German Nobel Prize Winners in English
112. Feminist Issues in German Literature and Culture
113. German Folklore
114. Fairy Tales and Fantastical
117. German Exile Culture in Los Angeles

Hungarian (Slavic, East European, and Eurasian Languages and Cultures)
121. Survey of Hungarian Literature in Translation

Iranian (Near Eastern Languages and Cultures)
150A-150B. Survey of Persian Literature in English

Italian (Italian)
42A-42B-42C. Italy through Ages in English
46. Italian Cinema and Culture in English
50A-50B. Masterpieces of Italian Literature in English
102A-102B-102C. Italian Cultural Experience in English
110. Dante in English
140. Italian Novella from Boccaccio to Basile in Translation
150. Modern Fiction in Translation
151. Italy and Asia
152. Italy between Europe and Africa
M158. Women, Gender, and Sexuality in Italian Culture
230A-230B. Folk Tradition in Italian Literature
260A. Alternative Perspectives in Italian Culture: Studies of Folk Tradition in Italian Literature
260B. Women in Italian Culture
260C. Studies in Italian Cinema
Japanese (Asian Languages and Cultures)
70. Images of Japan: Literature and Film
75. Anime
C150. Topics in Japanese Literature and Philosophy
151. Japanese Literature in Translation: Modern
154. Postwar Japanese Culture through Literature
M156. Literature and Technology
157. Classical Japanese Drama: Great Tradition
158. Love in Modern Japan
170. Japanese Tales of Supernatural
172. Fiction and Plays of Floating World
174. Classical Japanese Poetry

Jewish Studies (Near Eastern Languages and Cultures)
M150A-150B. Hebrew Literature in English
M151A-151B. Modern Jewish Literature in English
175. Modern Israelite Literature Made into Films

Korean (Asian Languages and Cultures)
150. Korean Literature in Translation: Classical
C151. Korean Literature in Translation: Modern

Polish (Slavic, East European, and Eurasian Languages and Cultures)
152A-152B-152C. Survey of Polish Literature

Portuguese (Spanish and Portuguese)
40A-40B. Portuguese, Brazilian, and African Literature in Translation
41A. Brazil and Portuguese-Speaking World
41C. Travel Narratives, Testimony, Autobiography

Romanian (Slavic, East European, and Eurasian Languages and Cultures)
152. Survey of Romanian Literature

Russian (Slavic, East European, and Eurasian Languages and Cultures)
25, 25W. Russian Novel in Translation
30. Russian Literature and World Cinema
M118. History of Russia, Origins to Rise of Muscovy
119. Golden Age and Great Realists
120. Literature and Revolution
121. Russian Pop Culture
124C-124T. Studies in Russian Literature
125. Russian Novel in Its European Setting
126. Survey of Russian Drama
M127. Women in Russian Literature
128. Russian Science Fiction
C170. Russian Folklore

Scandinavian (Scandinavian Section)
40, 40W. Heroic Journey in Northern Myth, Legend, and Epic
50, 50W. Introduction to Scandinavian Literatures and Cultures
C131. Introduction to Viking Age
C133A. Saga
134. Scandinavian Mythology
C137. Old Norse Literature and Society
138. Vikings
C141A. Theory of Scandinavian Novel
141B. Nordic Poetry
141C. Short Story in Scandinavia
142A. Introduction to Nordic Theater and Drama
143A. Scandinavian Detective Fiction
143C. Scandinavian Crime Literature
CM14A-14C. Voices of Women in Nordic Literature
C145A. Henrik Ibsen
C145B. Knut Hamsun
C146A. August Strindberg
147A. Hans Christian Andersen
C147B. Søren Kierkegaard
147C. Karen Blixen
148A. Halldór Laxness
152. Backgrounds of Scandinavian Literature
154. Romanticism
155. Modern Breakthrough
156. Scandinavian Literature of 20th Century
157. Contemporary Nordic Literature
161. Introduction to Nordic Cinema
C163A. Introduction to Danish Cinema
C163B. Introduction to Swedish Cinema
C163C. Introduction to Norwegian Cinema
C166A. Ingmar Bergman
C166C. Carl Dreyer
C171. Introduction to Scandinavian Folklore
172A. Nordic Folk and Fairy Tales
174A. Minority Cultures in Scandinavia
173A. Popular Culture in Scandinavia
174B. Queer Scandinavia
C175. Introduction to Sami Language and Culture
C180. Literature and Scandinavian Society
C185. Seminar: Scandinavian Literature

Serbian/Croatian (Slavic, East European, and Eurasian Languages and Cultures)
154. South Slavic Literature

Slavic (Slavic, East European, and Eurasian Languages and Cultures)
90. Introduction to Slavic Civilization

South Asian (Asian Languages and Cultures)
150. Classical Indian Literature in Translation

Southeast Asian (Asian Languages and Cultures)
70. Modern Southeast Asian Literature
90. Modern Literatures in Southeast Asia
130. Topics in Southeast Asian Literature

Spanish (Spanish and Portuguese)
60A-60B-60C. Hispanic Literatures in Translation

Ukrainian (Slavic, East European, and Eurasian Languages and Cultures)
152. Ukrainian Literature

Vietnamese (Asian Languages and Cultures)
M155. Topics in Vietnamese Cinema and/or Literature

Yiddish (Germanic Languages)
121A. 20th-Century Yiddish Poetry in English Translation
121B. 20th-Century Yiddish Prose and Drama in English Translation
121C. Special Topics in Yiddish Literature in English Translation
French and Francophone Studies

College of Letters and Science

212 Royce Hall
Box 951550
Los Angeles, CA 90095-1550
310-825-1145
http://www.french.ucla.edu

Dominic R. Thomas, PhD, Chair
Jean-Claude Carron, Docteur ès Lettres, Undergraduate Studies Director

Professors
Jean-Claude Carron, Docteur ès Lettres
Patrick J. Coleman, PhD
Eleanor K. Kaufman, PhD
Elfrain Kristal, PhD
Françoise Lionnet, PhD
Alain M. Mabancoukou, DEA
Sara E. Melzer, PhD
Laure Murat, Docteur en Histoire
Allen F. Roberts, PhD
Zrinka Stahuljak, PhD
Malina Stefanovska, PhD
Dominic R. Thomas, PhD (Madeleine L. Letessier Professor of French and Francophone Studies)
Eric L. Gans, PhD
Zrinka Stahuljak, PhD

Professors Emeriti
Marc J. Bensimon, PhD
Eric L. Gans, PhD
Andrea N. Loselle, PhD

Associate Professor
Lia N. Brozgal, PhD

Senior Lecturer
Kimberly Jansma, PhD

Lecturer
Laurence M. Deniél-Higney, PhD

Scope and Objectives

The Department of French and Francophone Studies is a major West Coast center for the study of French. In recent decades French critical thought has maintained a dominant position in the Western world. The department seeks to give its students not only a background in the various fields of French and Francophone studies, but also opportunity to relate literary, linguistic, and cultural study to examination of the critical intellectual questions of our time.

The undergraduate lower-division program is designed to provide students with practical competence in French after one year and thorough basic knowledge of the language after two years.

The undergraduate upper-division program is chiefly devoted to perfecting linguistic skills and to the study of French and Francophone culture and literature. Courses in linguistics and business French are also offered. Students graduating with a Bachelor of Arts in French should be fully fluent in French and possess a thorough background in French and Francophone literature and culture. Both Bachelor of Arts degrees lead to graduate studies in French.

The graduate program offers both MA and PhD degrees and comprises training in the various fields of French and Francophone culture, literature, and thought, as well as in literary criticism, analysis, and theory. A number of courses in linguistics and stylistics are also offered.

Undergraduate Study

If students have taken French elsewhere, they must take a placement test administered by the department. Depending on the results of the placement test or with recommendation of an instructor, they may be permitted to enroll in a course of study at a more advanced level.

Requisites to all upper-division courses taken in partial fulfillment of the French majors are French 6, 12, or equivalent. Courses 105 through 109 are not sequential and may be taken in any order, provided the requisites for each course are fulfilled.

No credit is allowed for completing a less advanced course after successful completion of a more advanced course in French grammar and/or composition.

The French major is a designated capstone major. Students are required to complete a capstone seminar that is thematically devised to reflect current trends in the discipline. Through the capstone experience, students work closely with a faculty member on a focused topic of research. They engage in presentations and weekly discussions and write a research paper demonstrating language proficiency, critical and creative thinking, analytical skills, and a cultural perspective.

French BA

Capstone Major

Preparation for the Major

Required: French 1, 2, 3, 4, 5, 6, 12, or equivalent. Students normally take course 6 before undertaking course 12. Students who receive a grade of A in course 5 may enroll in course 12 concurrently with course 6, with consent of the instructor.

Transfer Students

Transfer applicants to the French major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of French and one French literature course. Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Two plans are offered by the department:

Plan I: French/Francophone Studies in Literature and Culture

Required: French 100, 101, two courses from 114A, 114B, and 114C, one senior capstone seminar (191B), four upper-division elective courses in French and Francophone studies, and three upper-division elective courses in fields relevant to French and Francophone studies to be selected from outside the department in consultation with the undergraduate adviser. Each course must be taken for a letter grade.

Plan II: Interdisciplinary French/Francophone Studies

Required: French 100, 101, one course from 114A, 114B, or 114C, one senior capstone seminar (191B), four upper-division elective courses in French and Francophone studies, and three upper-division elective courses in fields relevant to French and Francophone studies to be selected from outside the department in consultation with the undergraduate adviser. Each course must be taken for a letter grade.

French and Francophone Studies / 371

French and Linguistics BA

Preparation for the Major

Required: French 1, 2, 3, 4, 5, 6, 12, or equivalent. Linguistics 20, completion of the third term of a second foreign language. Students normally take course 6 before undertaking course 12. Students who receive a grade of A in course 5 may enroll in course 12 concurrently with course 6, with consent of the instructor.
Transfer Students
Transfer applicants to the French and Linguistics major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of French, one French literature course, and one introduction to linguistics course. Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major
Required: French 100, 101, 104, one course from 114A, 114B, or 114C, two courses from 105, 107, 108, 109, 110, one upper-division French elective course, and Linguistics 103, 110, 120A, 120B. Each course must be taken for a letter grade.

It is strongly advised that students who intend to pursue advanced degrees begin preparation for the language requirements at the undergraduate level.

If students' knowledge of French exceeds the preparation usually received in courses preparing for the major and if they demonstrate the requisite attainment in French 100 or 101, they may substitute for those courses in grammar and composition an equivalent number of upper-division courses in the French and Francophone Studies Department in consultation with an adviser. All prospective French and Linguistics majors who are native or quasi-native speakers of French must see the undergraduate adviser before beginning upper-division work in the major.

All majors must complete a minimum of nine courses of appropriate upper-division work in the UCLA French and Francophone Studies Department. Freshmen and sophomores may take up to two courses taught in English, selected from French 164 through 167, in fulfillment of major requirements (if taken in the junior or senior year, these courses count as electives). A maximum of 6 units of course 199 may be applied toward toward the elective requirement for the major if approved in advance by the undergraduate adviser. Students must maintain a C average in upper-division major courses in order to remain in the French and Linguistics major.

Coursework taken on a Passed/Not Passed basis is not acceptable in any area of the major program.

It is recommended that students intending to major in French and Linguistics consult with the undergraduate adviser before enrolling in upper-division courses.

Honors Program
The department encourages those students in the French majors with initiative and independence of mind who desire an enriched individualized course of study to apply for the honors program.

The honors program is designed for French majors who have fulfilled their lower-division requirements and have a 3.5 departmental grade-point average. Students whose GPA falls between 3.3 and 3.5 should submit a composition from an advanced language or literature course to the honors committee. If the work submitted meets with approval, students are admitted to the program.

To graduate with departmental honors, students must complete a minimum of two honors projects in the context of nonhonors upper-division courses (French 115 and above) taken for honors credit. They must do an honors project (a research paper of 12 to 15 pages) in addition to the regular course requirements. An honors contract must be signed before the end of the third week of the term. After completing the project, students fill out a completion form. On the basis of their coursework and field of interest, students are expected to formulate a research topic they wish to pursue in greater depth. They take course 199 where they receive regular personal supervision from a faculty member in the research, methodology, and writing of their approximately 20- to 25-page honors thesis (honors projects and the honors thesis are not to be confused).

Students may begin the honors program toward the end of their junior year or during their senior year. Students are allowed to enroll in graduate courses with the consent of the instructor but cannot use those courses to replace an honors project. Departmental honors are recorded on the final transcript if students fulfill all requirements for the program. They may submit their final honors thesis for the departmental prize.

French Minor
To enter the French minor, students must have an overall grade-point average of 2.0 or better. Required Lower-Division Courses (8 units): French 6 or equivalent and one course from 12, 14, 41, or 60. Required Upper-Division Courses (20 units): French 100 or 101, and four additional departmental courses in language, culture, or literature to be selected in consultation with an undergraduate counselor. A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor. Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of French and Francophone Studies offers Master of Arts (MA), Candidate in Philosophy (CPHIL), and Doctor of Philosophy (PhD) degrees in French and Francophone Studies.

French
Lower-Division Courses
1. Elementary French. (4) Lecture, five hours. P/NP or letter grading.
10. Elementary French for Graduate Students. (3) Lecture, three hours. Preparation for GSFLT or other language examinations. Passing grade does not imply satisfaction of language requirements. S/U grading.
2. Elementary French. (4) Lecture, five hours. Enforced requisite: course 1 with grade of C– or better. P/NP or letter grading.
3. Elementary French. (4) Lecture, five hours. Enforced requisite: course 2 with grade of C– or better. P/NP or letter grading.
8. Intensive First-Year French. (12) Lecture, 15 hours. All-in-French intensive language program equivalent to first year of college French and designed to develop basic language skills. Additional work in language and media laboratory required. Offered in summer only. P/NP or letter grading.
9. Intensive Second-Year French. (8) Lecture, 10 hours; media laboratory, three hours. Enforced requisite: course 3. Intensive course equivalent to first two terms of intermediate French and designed to improve proficiency in reading, writing, and speaking. Offered in summer only. P/NP or letter grading.
10A-10D. French Conversation. (2 each) Discussion, three hours. Enforced requisite: course 3 with grade of B or better. P/NP or letter grading.
12. Introduction to Study of French and Francophone Literature. (5) Lecture, two hours; discussion, one hour. Enforced requisite: course 6. Prerequisites: literary analysis as applied to selected texts in poetry, theater, and prose by French and Francophone writers. P/NP or letter grading.
14. Introduction to French Culture and Civilization in English. (5) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 14W. Study of contemporary French institutions and issues in cultural, political, and socioeconomic realms. P/NP or letter grading.
14W. Introduction to French Culture and Civilization in English. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 14. Study of contemporary French institutions and issues in cultural, political, and socioeconomic realms. Satisfies Writing II requirement. Letter grading.
41. French Cinema and Culture. (5) Lecture; screenings, five hours; discussion, one hour. Introduction to French culture and literature through study of films of cultural and literary significance. P/NP or letter grading.
60. French and Francophone Novel. (5) Lecture, three hours; discussion, one hour. Study of literary masterpieces produced by writers from France and Francophone world (Canada, Africa, Caribbean, etc.) from 17th to early 21st century. P/NP or letter grading.
Upper-Division Courses


112. Medieval Foundations of European Civilization. (4) Lecture, three hours; discussion/film screenings, two hours. Medieval texts, culture, social structure, and political history as they lay bases of European society. P/NP or letter grading.


114A. Medieval and Renaissance Literature. (5) Lecture, three hours. Requisite: course 12. Masterpieces of medieval and Renaissance literature, including examples of epic (La Chanson de Roland), romance (Chrétien de Troyes' Yvain), and Renaissance prose and poetry (including Marot, Du Bellay, Ronsard, Rabelais, Marguerite de Navarre, and Montaigne). P/NP or letter grading.

114B. 17th and 18th Centuries. (5) Lecture, three hours. Requisite: course 12. Study of novels and short stories of the 17th and 18th centuries, including those by Racine, Pascal, La Fayette, La Fontaine, Laclos, Diderot, Voltare, and Rousseau. P/NP or letter grading.


115. Studies in Medieval French Culture and Literature. (4) Lecture, three hours. Enforced requisite: course 100. Taught in French. Study of Renaissance French literature, including the Pléiade and 16th-century poetry, linguistic and poetic revolution, and late French humanism. May be repeated for credit with topic change. P/NP or letter grading.

116. Studies in Renaissance French Culture and Literature. (4) Lecture, three hours. Taught in French. Study of Renaissance French culture and literature, including la Pléiade and 16th-century poetry, linguistic and poetic revolution, and late French humanism. May be repeated for credit with topic change. P/NP or letter grading.

117. Studies in 17th-Century French Culture and Literature. (4) Lecture, three hours. Enforced requisite: course 100. Taught in French. Study of 17th-century French culture and literature, including theater, philosophers, moralists, novelists, and cultural, political, social, religious, and courtly aspects. May be repeated for credit with topic change. P/NP or letter grading.

118. Studies in 18th-Century French Culture and Literature. (4) Lecture, three hours. Taught in French. Study of 18th-century French culture and literature, including 18th-century novelists, philosophers, and the theoretical writings. May be repeated for credit with topic change. P/NP or letter grading.

119. Studies in 19th-Century French Culture and Literature. (4) Lecture, three hours. Enforced requisite: course 100. Taught in French. Study of 19th-century French culture and literature, including Romanticism, generation of 1848, naturalism and symbolism, and genres and trends from 1885 through World War I. May be repeated for credit with topic change. P/NP or letter grading.

120. Studies in 20th-Century French Culture and Literature. (4) Lecture, three hours. Taught in French. Study of 20th-century French culture and literature, including early 20th-century writers, surrealism, literature from 1915 to 1945, post-WWII literature, existentialism, new novel, theater, and poetry. May be repeated for credit with topic change. P/NP or letter grading.

121. Studies in Francophone Cultures and Literatures. (4) Lecture, three hours. Enforced requisite: course 100. Taught in French. Study of Francophone literature and culture, including French-speaking Africa, Caribbean, Quebec, and sub-Saharan Africa, immigrant narrators, and colonialism and postcolonial studies. May be repeated for credit with topic change. P/NP or letter grading.

130. Contemporary French and Francophone Cultures. (4) Lecture, three hours. Requisite: course 12 or 100. Taught in French. Study of contemporary French and Francophone world (Africa, Asia, Caribbean, Quebec), government, institutions, and cultural, economic, social, and political issues. May be repeated for credit with topic change. Letter grading.

131. French and Francophone Theater. (4) Lecture, three hours. Taught in French. Through plays of 20th century, analysis of struggles of individuals and social groups in contexts that are historical, political, philosophical (existentialism, absurd), and cultural (colonialism and conformism). May be repeated for credit with topic change. P/NP or letter grading.


136. French and Francophone Intellectual History. (4) Lecture, three hours. Requisite: course 12 or 100. Taught in French. Exploration of themes that address particular problem of French literature, civilization, or ideas. May be repeated for credit with topic change. P/NP or letter grading.

137. Contemporary French Theory. (4) Lecture, three hours. Requisite: course 12 or 100. Taught in French. Study of French theorists (Barthes, Baudrillard, Cixous, Derrida, Foucault, Irigaray) and major concepts in contemporary French thought, with attention to its influence on and application to literary and nonliterary texts. May be repeated for credit with topic change. P/NP or letter grading.


M140. Women's Studies in French Literature. (4) (Same as Gender Studies M140.) Lecture, three hours. Exploration of selected aspect of situation of women in French literature, as author, character, symbol, etc. P/NP or letter grading.

141. French Cinema. (3) Lecture, three hours. Study of French cinema and cinematographers in genre, thematic, and sociocultural aspects. May be repeated for credit with topic change. P/NP or letter grading.

142. Francophone Cinema. (3) Lecture, three hours. Study of Francophone (Africa, Caribbean, postcolonial communities in France) cinema and cinematographers in generic, thematic, and sociocultural aspects. May be repeated for credit with topic change. P/NP or letter grading.

143. French and Francophone Theater in Translation. (3) Lecture, three hours. Study of 20th-century French culture and literature, including French-speaking Africa, Caribbean, Quebec, and sub-Saharan Africa, immigrant narrators, and colonialism and postcolonial studies. May be repeated for credit with topic change. P/NP or letter grading.

144. French and Francophone Film. (3) Lecture, three hours. Study of French cinema and cinematographers in genre, thematic, and sociocultural aspects. May be repeated for credit with topic change. P/NP or letter grading.

145. French and Francophone Theater in Translation. (3) Lecture, three hours. Study of 20th-century French culture and literature, including French-speaking Africa, Caribbean, Quebec, and sub-Saharan Africa, immigrant narrators, and colonialism and postcolonial studies. May be repeated for credit with topic change. P/NP or letter grading.


147. French and Francophone Novel in Translation. (3) Lecture, three hours. Study of French novels. May be repeated for credit with topic change. P/NP or letter grading.


171. Medieval French. (4) Lecture, three hours. Examination of Middle Ages across issues such as gender, class, race, religion, sexuality, love, and death. Exploration of each of these key terms in Middle Ages and look at Middle Ages through projection screen for interaction, contesting, and resolving contemporary debates on gender, class, race, and religion. Contrasting of medieval and modern around issue of difference and diversity; sessions to be situated in their historical cross-cultural contexts. Film screenings accompanied by medieval texts. P/NP or letter grading.


191A. Variable Topics Research Seminars in Translation. (4) Lecture, three hours. Research seminars on topics to be announced each term. Topics include major writers, genres, cultural movements, or theoretical practices. Reading, discussion, and development of culminating project. May be repeated for credit with consent of major adviser. P/NP or letter grading.

191B. Variable Topics Research Seminars: French. (4) Seminar, three hours. Taught in French. Research seminars topics to be announced each term. Topics include major writers, genres, cultural movements, or theoretical practices. Reading, discussion, and development of culminating project. May be repeated for credit with consent of major adviser. P/NP or letter grading.

195. Community or Corporate Internship in French. (4) Tutorial, to be arranged. Limited to juniors/seniors. Internship in supervised setting in community agency. Students meet on regular basis with instructor and provide periodic reports of their experience. May be repeated for credit. Individual contract with supervising faculty member required. P/NP or letter grading.

196. Honors Research in French. (4) Tutorial, three hours. Limited to junior/senior French majors with 3.5 departmental and 3.25 overall grade-point averages. Development and completion of honors thesis or comprehensive research project under direct advisement of faculty member. May be repeated for credit. Individual contract required. Letter grading.

199. Directed Research or Senior Project in French. (2 to 4) Tutorial, three hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses


201. Techniques of Literary Analysis. (4) Lecture, three hours. Practice in close analysis of literary texts, including explicatio de texte. S/U or letter grading.

202. Cultural Studies. (4) Lecture, three hours. Introduction to theoretical approaches to popular and mass culture, and to postcolonial and Francophone cultures. Topics include emergent disciplines and theories as sociology and structuralism, city, revolution, avant-garde strategies, media, diaspora during postwar modernization, Algerian War, May 68, and beyond. Theorists include Barthes, de Certeau, Bourdieu, Baudrillard, Lyotard, Ross, Roy Chow, Virilio. S/U or letter grading.

203. Contemporary Francophone Literature. (4) Lecture, three hours. Study of Francophone African, Caribbean, Vietnamese, or Quebec literatures and cultures, with specific attention to issues of cultural contact, language, colonialism, anticolonialism, nationalism, resistance and dissidence, and postcolonial theory. S/U or letter grading.

204. Studies in Autobiography. (4) Lecture, three hours. Introduction to theories of autobiography and subjectivity, and to genre of autobiography in literatures in French across centuries. Topics include early modern approaches to self-writing, Rousseau and emergence of modern self, women's autobiography in France and Francophone world. Theorists may include Georges Guersdorf, Philippe Lejeune, Paul de Man, Jacques, Helene Cixous, Michel Foucault, Pierre Bourdieu, Toril Moi. S/U or letter grading.


207. Studies in History of Ideas. (4) Seminar, three hours. Particular problems in French literature and ideas. May be repeated for credit. S/U or letter grading.

208. Studies in Literary Criticism. (4) Seminar, three hours. Readings in literary criticism, theory, and literature from any period of French literature. May be repeated for credit. S/U or letter grading.

209. Studies in Literary Genre. (4) Seminar, three hours. Advanced research and study of literary genres such as poetry, drama, fiction, autobiography, or performance and of theory of these genres. S/U or letter grading.

210. Paleography of Latin and Vernacular Manuscripts, 900 to 1500. (4) (Same as Classics M218, English M215, and History M218.) Lecture, three hours; discussion, two hours. Introduction to history of Latin and vernacular manuscript book from 900 to 1500 to 1) train students to make informed judgments with regard to place and date of origin, 2) provide training in accurate reading and transcription of medieval sources, and 3) examine manuscript book as witness to changing society that produced it. Focus on relationship between Latin manuscripts and vernacular manuscripts with regard to their respective presentation of written texts. S/U or letter grading.


215. Studies in Middle Ages. (4) Seminar, three hours. Examination of nature of cross-cultural, cross-linguistic, and cross-confessional exchange in medieval and early modern periods and France's role in it. S/U or letter grading.


220. 20th Century. (4) Lecture, three hours. Overview, both historical and analytical, of 20th-century French literature set in context of several key critical topics that interrogate canonical interpretation. Letter grading.

296. Research Methods and Writing. (2) Seminar, two hours. Advanced study of current topics in literary and cultural analysis and in critical theory. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

297. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.


296. Directied Individual Studies or Research. (2 to 4) Tutorial, to be arranged. May be repeated for maximum of 16 units. S/U grading.

298. Research and for Preparation of MA Thesis. (2 to 4) Tutorial, to be arranged. Maximum of 4 units may be applied toward MA degree requirements. S/U grading.


FRESHMAN GENERAL EDUCATION CLUSTERS

See Cluster Program

GENDER STUDIES

College of Letters and Science

1120 Rolfe Hall
Box 951504
Los Angeles, CA 90095-1504
310-206-8101
info@genderstudies.ucla.edu
http://www.genderstudies.ucla.edu

Elizabeth A. Marchant, PhD, Chair

Professors
Ellen C. DuBois, PhD
Alicia Gaspar de Alba, PhD
Gil Z. Hochberg, PhD
Grace Kyungwon Hong, PhD
Douglas M. Kellner, PhD
Rachel C. Lee, PhD
Francoise Lionnet, PhD
Purnima Mankekar, PhD
Kathleen A. McHugh, PhD
Rafael Perez-Torres, PhD
Sherene H. Razack, PhD (Penny Kanner Endowed Professor of Women’s Studies)
Lucia Re, PhD, Dottore in Lettere
Abigail C. Sagy, PhD
Jennifer A. Sharpe, PhD
Juliet A. Williams, PhD

Professors Emeriti
Sondra Hale, PhD
Sandra Harding, PhD
Christine A. Littleton, JD
Susan K. McClay, PhD

Associate Professors
Mayel S. Blackwell, PhD
Lucy M. Burns, PhD
Jessica R. Cattelino, PhD
Lieba L. Faier, PhD
Aisha K. Finch, PhD
Mishuana R. Goeman, PhD
Scope and Objectives

The Department of Gender Studies offers interdisciplinary academic programs that are both nationally and transnationally oriented. The undergraduate program offers a Bachelor of Arts degree and a minor; the graduate program offers Master of Arts (for PhD students only, no terminal master's) and PhD degrees. Students develop critical reasoning and analytical skills, a deep appreciation for complexities of power and asymmetries in gender relations across time, class, and cultures, and conceptual tools for social change.

The gender studies curriculum challenges the pervasive theory/practice divide within the academy. In both undergraduate and graduate courses, students are taught a broad range of methodological and analytical skills. Core undergraduate courses contextualize foundational theories and key analytic concepts within the study of different historical periods and social movements. In designating these courses Power, Knowledge, and Bodies, the department identifies three primary areas in which feminist and queer inquiry has been concentrated over time, enabling students to trace grounding concepts, key controversies, and the emergence of new theoretical paradigms.

The department has long enjoyed recognition for its strengths in areas including women's history, feminist science studies, and gender and the law. Over the past several years, it has become a leading program for interdisciplinary intersectional feminist scholarship on gender, sexuality, race, class, and nationality and is building a strong reputation in the areas of transnational literary and media studies, postcolonial feminist studies, studies of settler colonialism, feminist science studies, feminist policy studies, queer of color critique, and women of color feminism.

Undergraduate Study

The Gender Studies major is a designated capstone major. Students are required to complete a senior seminar in which they conduct original research while studying readings that consider how disciplinary and interdisciplinary research has been conducted and critiqued. Through their senior seminar work, students produce a significant work that may include an original research paper, a media project, or an in-depth literature review. They are expected to demonstrate working knowledge of the field of gender studies; understand key theoretical approaches in the study of women, gender, and sexuality; have ability to construct well-written analytic essays and present their work orally; and conduct a research project that involves the consultation of scholarly literature and presentation of evidence to support an argument.

Gender Studies BA

Capstone Major

The major in Gender Studies may be taken alone or in conjunction with another Letters and Science major. In the case of a double major, no more than five courses may be applied toward both majors.

Admission

To be admitted to the major, students must have completed Gender Studies 10, be in good standing, and formally register with the department. They are encouraged to declare their major as early as possible and to discuss their proposed course of study with the undergraduate adviser.

Students are encouraged to draw on diverse University resources in creating their program of study. They may pursue traditional and/or innovative subjects in fields ranging from the humanities and fine arts to the social and life sciences. In addition to courses on the gender studies approved list, students may petition to have diverse courses accepted, including courses outside the College of Letters and Science, independent studies, or field study courses.

Each course applied toward the major must be taken for a letter grade, and students must have a grade-point average of 2.0 or better in gender studies courses to receive credit for completing the program. Courses in which they receive grades of C– or lower may not be applied toward the required courses in the major.

Preparation for the Major

Required: Gender Studies 10. Students must also complete departmental lower-division requisites, as applicable, for upper-division gender studies courses.

Transfer Students

Transfer applicants to the Gender Studies major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one multidisciplinary gender studies course and departmental lower-division requisite courses.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

The major is designed to (1) impart core concepts in theory and critical analysis, research design, and methods and (2) provide students with exposure to a range of feminist and queer scholarship across disciplines. To achieve these goals, the major is divided into three categories.

Required for Students Who Entered Prior to Fall Quarter 2011: At least 11 upper-division courses (minimum of 4 units each) as follows:

(1) two core courses selected from Gender Studies 102, 103, 104, M110C, 130, or former courses 110A and 110B, (2) eight elective courses; one upper-division tutorial (minimum of 4 units) selected from course 195, 197, or 199 may be applied toward the elective requirement (this limit does not apply to course 198A or 198B), and (3) course 187 (capstone seminar).

Required for Students Who Entered Fall Quarter 2011 and Thereafter: At least 11 upper-division courses (minimum of 4 units each) as follows: (1) three core courses—Gender Studies 102, 103, 104, (2) seven elective courses; one upper-division tutorial (minimum of 4 units) selected from course 195, 197, or 199 may be applied toward the elective requirement (this limit does not apply to course 198A or 198B), and (3) course 187 (capstone seminar).

Honors Program

The honors program is open to advanced junior and senior Gender Studies majors with a 3.6 grade-point average in gender studies courses and a minimum 3.4 overall GPA who have no outstanding Incomplete grades, and to majors who demonstrate ability to do honors work by submitting a paper to the department chair for approval.

To qualify for honors at graduation, students must successfully complete three successive terms of honors research (courses 198A, 198B, 198C) with their faculty sponsor and receive a grade of B+ or better on their research paper/project. Course 198A may be applied toward the elective requirement; courses 198B and 198C are in addition to the minimum required courses. Further information is available from the undergraduate counselor in the department office.

Gender Studies Minor

The Gender Studies minor augments and enriches study in a traditional field. Students participating in this program are required to complete both a departmental major and the Gender Studies minor.

To enter the minor, students must have an overall grade-point average of 2.0 or better and formally register with the department undergraduate advisers in 1120 Rolfe Hall. They are encouraged to declare the minor as early as possible.

Required Lower-Division Course (5 units): Gender Studies 10. Students must also complete departmental lower-division requisites, as applicable, for upper-division gender studies courses.

Required Upper-Division Courses (24 units): (1) One core course from Gender Studies 102, 103, or 104, (2) 120SL or 187 or an equivalent senior research seminar approved in advance, and (3) four upper-division courses (minimum of 4 units each) from the approved gender studies course list. No more than 4 units of courses 195 through 199 may be applied.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.
M104C. Diversity in Aging: Roles of Gender and Ethnicity. (4) (Same as Chicana and Chicano Studies M106B, Gerontology M104C, and Social Welfare M104C.) Lecture, four hours. Exploration of complexity of variables related to diversity of aging population and variability in aging process. Examination of gender and ethnicity within context of both physical and social aging, in multidisciplinary perspective utilizing faculty from variety of fields to address issues of diversity. Letter grade or pass/no pass grading.


M105A. Premodern Queer Literatures and Cultures. (5) (Same as English M101A and Lesbian, Gay, Bisexual, Transgender, and Queer Studies M101A) Lecture, four hours; discussion, one hour (when scheduled). Enforced prerequisite: English Composition 3. Survey of discrete period of queer literature from beginning to circa 1850. Works by such writers as Sappho, Plato, Marlowe, Shakespeare, and Thomas Gray may be included. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M105B. Queer Literatures and Cultures, 1850 to 1970. (5) (Same as English M101B and Lesbian, Gay, Bisexual, Transgender, and Queer Studies M101B) Lecture, four hours; discussion, one hour (when scheduled). Enforced prerequisite: English Composition 3. Survey of discrete period of queer literature and culture from circa 1850 to 1970. Works by such authors as Walt Whitman, Radclyffe Hall, Gertrude Stein, Virginia Woolf, Langston Hughes, Tennessee Williams, Henry Blake Fuller, and James Baldwin may be included. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M105C. Queer Literatures and Cultures after 1970. (5) (Same as English M101C and Lesbian, Gay, Bisexual, Transgender, and Queer Studies M101C) Lecture, four hours; discussion, one hour (when scheduled). Enforced prerequisite: English Composition 3. Examination of cultural production, specifically literary production, by queers after Stonewall rebellion in New York in 1969, widely regarded as origins or beginning of modern lesbian and gay rights movement in U.S. Writings and authors as Andrew Holleran, Leslie Feinberg, Achy Obejas, Essex Hemphill, Audre Lorde, Cheryl Dunye, and Alison Bechdel may be included. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M105D. Studies in Queer Literatures and Cultures. (5) (Same as English M101D and Lesbian, Gay, Bisexual, Transgender, and Queer Studies M101D) Lecture, four hours; discussion, one hour (when scheduled). Enforced prerequisite: English Composition 3. Variable specialized studies course in queer literatures and cultures. Topics focus on particular problem or issue in time period. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M106. Imaginary Women. (5) (Same as Honors College M102 and Lesbian, Gay, Bisexual, Transgender, and Queer Studies M102) Lecture, four hours; discussion, one hour (when scheduled). Enforced prerequisite: English Composition 3. Focus on women writers that may include historical, regional, national, or thematic emphasis, with possible topics such as authorship, self-writing, sexuality, gender, and genre. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M107A. Studies in Women's Writing. (5) (Same as English M107A) Lecture, four hours; discussion, one hour (when scheduled). Enforced prerequisite: English Composition 3. Focus on women writers that may include historical, regional, national, or thematic emphasis, with possible topics such as authorship, self-writing, sexuality, gender, and genre. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M107B. Studies in Gender and Sexuality. (5) (Same as English M107B and Lesbian, Gay, Bisexual, Transgender, and Queer Studies M107B) Lecture, four hours; discussion, one hour (when scheduled). Enforced prerequisite: English Composition 3. Examination of literary and cultural production through lens of gender and sexuality. Depending on instructor, emphasis may be historical, regional, national, comparative, or thematic and include other intersectional vectors of identity and representation of gender and ethnicity. May be repeated for credit with topic or instructor change. P/NP or letter grading.


M109. Women in Jazz. (4) (Same as African American Studies M109 and Ethnomusicology M110) Lecture, four hours; discussion, one hour. Sociocultural history of women in jazz and allied musical traditions from 1880s to present. Survey of women vocalists, instrumentalists, composers/arrangers, and producers and their impact on development of jazz. P/NP or letter grading.

M110C. Philosophical Analysis of Issues in Feminist Theory. (4) (Same as Philosophy M110) Lecture, three hours. Enforced prerequisite: Gender Studies majors: course 10; for other students: one philosophy course. Examination in depth of philosophical implications on gender and women as they have been applied to study of philosophy. Emphasis on theoretical contributions made by new scholarship on women in philosophical study of concepts and principles that arise in discussion of women's rights and liberation. Philosophical approach to feminist theories. May be repeated for credit with consent of instructor. Letter grading.

M111. Women and Film. (6) (Same as Film and Television M111) Lecture, eight hours; discussion, one hour. Historical issues and critical approaches to women and cinema that may include authorship, stardom, female genres, and images of women in Hollywood cinema, alternative cinema, and independent cinema from silent era to present. Letter grading.

112. Special Topics in Women and Arts. (4) Lecture, three hours. Repeatable topics relating feminist theories to creation of art by women, with consideration of cultural contexts in which they work. Approach to be comparative, cross-cultural, and interdisciplinary. Consideration of artistic practice by women in relation to issues of power, representation, and access. May be repeated twice, except for credit toward Gender Studies major. P/NP or letter grading.

113. Sex Work. (4) Lecture, three hours. Enforced prerequisite: course 10. Analysis of variety of contemporary sexual work both in U.S. and abroad from feminist perspective. Examination of how race, class, and gender alter experience and perception of erotic labor, and consideration of critically feminist responses by range of authors to sex work. Topics include brothels, phone sex, strip clubs, sex tourism, military prostitution, and international traffic in persons. Reading of texts by sex workers, as well as articles from current philosophical and policy debates about sex work. P/NP or letter grading.

M114. Introduction to Lesbian, Gay, Bisexual, and Transgender Studies. (5) (Same as Lesbian, Gay, Bisexual, Transgender, and Queer Studies M114) Lecture, three hours; discussion, one hour. Introduction to theories of identity and representation of lesbians, gay men, bisexuals, and transgendered people; examination of sexuality and gender as categories for investigation; interdisciplinary theories and research on minority sexualities and genders. P/NP or letter grading.

M115. Topics in Study of Gender and Sexuality Orientation. (4) (Same as Lesbian, Gay, Bisexual, Transgender, and Queer Studies M115) Lecture/discussion, three hours. Enforced prerequisite: course 10 or M114. Studies in arts, humanities, social sciences, and/or...
life sciences on aspects of sexual orientation, gender identity, and lesbian, gay, and/or bisexual issues; variable topics may include cultural representations, historical and political change, life and health experiences, and queer or transgender theories; multilingual and multicultural emphasis. May be repeated for credit. Letter grading.


M118. Queering American History. (4) (Same as Lesbian, Gay, Bisexual, Transgender, and Queer Studies M118) Lecture, four hours. Enforced requisite: one prior lesbian, gay, bisexual, transgender, and queer studies course. History of sexual and gender minorities in U.S. Topics include changing norms, romantic friendships, medical discourse, liberation politics, post-Stonewall culture, AIDS, transgender movement, queer theory, and politics. P/NP or letter grading.

M119. Tristan, Isolde, and History of Heterosexuality. (4) (Same as German M105) Lecture, three hours. Taught in English. German, French, and English versions of Tristan and Isolde story from Middle Ages to 20th century. Exploration of relationship between representation of heterosexual love in each text and contemporaneous ideas about human sexuality. P/NP or letter grading.

120PS. Feminist Praxis: Community-Based Learning. (4) Seminar, three hours; fieldwork, four hours. Preparation: at least two gender studies core courses. Requisite: course 10 and one course from 102, 103, or 104. Service-learning course combining seminar with practical experience working on gender issues and connecting these experiences to theoretical and theoretical themes explored in gender studies core courses. Community partners selected in advance of consultation with Center for Community Learning. Letter grading.

M121. Topics in Gender and Disabilities. (4) (Same as Disability Studies M121) Lecture, three and one half hours. Limited to juniors/seniors. Ways in which issues of disability are affected by gender, with particular attention to various roles, positions, and concerns of women with disabilities. Approach is interdisciplinary, exploring how social categories of class, race, ethnicity, religion, age, sexuality, nationality, and citizenship affect and are affected by gender and disability. Topics may include law (civil rights, nondiscrimination, disability rights, literature, education, public policy, health). May be repeated for credit with topic and instructor change. P/NP or letter grading.

122. Masculinities. (4) Lecture, three hours. Enforced requisite: course 10. Masculinity as theorized by feminists and shaped by race, class, age, and nation. Topics include feminist theories of masculinity, male body, childhood and adolescent socialization, sport, male violence, homophobia, black masculinity, globalization and masculinity, and men’s movements in 1970s and beyond. Special emphasis on social sciences approaches and methodologies. P/NP or letter grading.

123. Gender, Race, and Class in Latin American Literature and Film, 1850 to 1950. (4) (Seminar, three hours. Requisite: course 10. Readings and discussion in English. Comparative study of cultural expression in Latin America, with emphasis on works produced or set in late-19th and early-20th centuries. Historical and social circumstances of women in different Latin American cultures, with particular concentration on how gender, sexuality, race, and class are absorbed and reflected in literature and film. Within this genealogy, examination of how cultural production sustains and transforms categories used to construct social, political, and cultural hierarchies. Topics include questions of authorship and authority such as women’s participation in formation of national cultures, engagement with artistic movements, and strategies of self-figuration. P/NP or letter grading.

M124. Sex, Race, and Difference in Transnational Film. (6) (Same as Film and Television M124) Lecture, three hours; discussion, one hour. Drawing on feminist media studies, training of students in media literacy so they acquire necessary skills to critically interpret film as medium of communication and to appreciate how film provides lens to examine some of most critical issues of our time. Development of understanding of transnationality to examine how circulations of commodities, labor, and capital traverse gender problematic, and sometimes reinforce national borders. Examination of role of film in both exemplifying and representing these conditions of transnationality. How are questions of economic and contemporary relationships between mobility, coercion, and migration; colonialism and settler colonialism; Orientalism, geopolitics, and sexuality; cultural identity and diaspora; transnational conceptions of sexual desire and embodiment; immigration and religious difference; and criminalization of racial difference. P/NP or letter grading.

125. Perspectives on Women’s Health. (4) Lecture/discussion, three hours. Requisite: course 10. Examination in depth of various women provide healthcare in both paid and unpaid capacities and of political, economic factors affecting women as recipients of healthcare. P/NP or letter grading.

M126. Feminist and Queer Theory. (5) (Same as English M126 and Lesbian, Gay, Bisexual, Transgender, and Queer Studies M126) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3. Recommended: one course from 102, 103, 104, English 120, or 121. Investigation of key concepts and debates in study of gender, sexuality, and kinship, with focus on their interrelated significance for making of culture. Readings to be interdisciplinary, with possible emphasis on impact of changing ideas of gender and sexuality or specific historical cultures. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M127. Women in Russian Literature. (4) (Same as Russian M127) Lecture, three hours. Designed for juniors/seniors. Lectures and readings in English. Introduction to alternative tradition of women’s writings in Russia and Soviet Union. Emphasis on images of women expressed in this tradition as compared with those found in works of contemporary male writers. P/NP or letter grading.


129. Women and Gender in Caribbean. (4) Seminar, three hours. Requisite: course 10. Exploration of way in which gender discourses have been central to making of Caribbean history and to some most enduring experiences, capitalist development, and coercive labor. Emphasis on women who lived through slavery and indentured servitude and who continue to live under systems of globaliza and neoliberal exploitation. How Caribbean women have historically empowered themselves and their communities, working in various ways to survive, radicalize, and transform their worlds. Ways in which ideas about gender and sexuality change and are reproduced and challenged and resistance to gendered and raced society. P/NP or letter grading.


CM132A. Chicana Feminism. (4) (Same as Chicana and Chicano Studies CM132) Lecture, four hours. Enforced requisite: course 10 or Chicana and Chicano Studies 10A. Examination of theories and practices of women who identify as Chicana feminist. Analysis of writings of Chicanas who do not identify as feminist but whose practices and political identities were shaped by Chicanas both within Chicana/Chicano community and dominant society. Attention to Anglo-European and Third World women’s experiences scheduled with course CM232A. P/NP or letter grading.

M132B. Contemporary Issues among Chicanas. (4) (Same as Chicana and Chicano Studies M154) Lecture, two and one half hours. Requisite: course 10. Overview of conditions facing Chicanas in U.S., including issues on family, immigration, reproduction, employment conditions. Comparative analysis with other Latinas. P/NP or letter grading.

CM133. Chicana Lesbian Literature. (4) (Formerly numbered CM133) (Same as Chicana and Chicano Studies M133 and Lesbian, Gay, Bisexual, Transgender, and Queer Studies M133) Lecture, four hours. Exploration of intersection of radical First and Third World feminist politics, lesbian sexuality and its relationship to Chicana identity, representation of lesbianism in Chicana literature, meaning of familias in Chicana lesbian lives, and impact of Chicana lesbian identity on Chicana literature. P/NP or letter grading.

CM133A-M133B. History of Women in Europe. (4-4) (Same as History M133A-M133B) Lecture, three hours; discussion, one hour (when scheduled). Design for juniors/seniors. History of prostitution from ancient times to present. Topics include toleration in medieval Europe, impact of syphilis, birth of coutesans, regulation in 19th-century Europe, white slavery trade, and contemporary global sex trade. Readings includes novels, primary sources, and testimony by sex workers. P/NP or letter grading.

M133C. Bilingual Writing Workshop. (4) (Same as Chicana and Chicano Studies M133C) Seminar, four hours. Limited to juniors/seniors. Writing sample required; access to course webpage mandatory; need not be bilingual to enroll. Technical instruction, analysis, and theoretical discussion of bilingual creative expression through genre of short fiction, Bilingualism as both politics and aesthetics to be central theme. Discussion and analysis of Chicana/Chicana and Latina/Latino short stories. Peer critique of weekly writing assignments. Emphasis on narrative techniques such as characterization, conflict, setting, point of view, and dialogue, and magical realism as prevailing Chicanesque/Latinesque style. Some attention to process of manuscript preparation, public reading. (Same as Chicana and Chicano Studies M133.)


M135C. Bilingual Writing Workshop. (4) (Same as Chicana and Chicano Studies M135C) Seminar, four hours. Limited to juniors/seniors. Writing sample required; access to course webpage mandatory; need not be bilingual to enroll. Technical instruction, analysis, and theoretical discussion of bilingual creative expression through genre of short fiction, Bilingualism as both politics and aesthetics to be central theme. Discussion and analysis of Chicana/Chicana and Latina/Latino short stories. Peer critique of weekly writing assignments. Emphasis on narrative techniques such as characterization, conflict, setting, point of view, and dialogue, and magical realism as prevailing Chicanesque/Latinesque style. Some attention to process of manuscript preparation, public reading. (Same as Chicana and Chicano Studies M135C.)

136. Music and Gender. (5) (Same as Music History M136) Lecture, four hours; discussion, one hour. Analysis of gender ideologies in several musical cultures; representations of gender, body, and sexuality by both male and female musicians; contributions of women to Western art and popular music; methods in feminist and gay/lesbian theory and criticism. Letter grading.
145. African American Women's History, (4) Seminar, three hours. Enrolled requisite: course 10. Historical examination of black women's experiences in U.S. from antebellum era to present. By situating their experiences within major historical transitions in American history, students consider the historical and ideological forces that shaped black women's lives. How is difference constructed through interrelated and overlapping ideologies of race and gender? How do historians uncover their historical lives and what challenges do they face in their individual and collective struggles for freedom from racism, sexism, and heteropatriarchy as well as their participation in and challenge to social movements, including suffrage, women's liberation, civil rights, and black power. P/NP or letter grading.

M146. Feminist Geography, (4) (Same as Geog- raphy M146.) Lecture, three hours; discussion, one hour. Critical engagement of gender as concept of geographic inquiry. Gender as spatial process, analysis of feminist geographic theory and methods, landscapes of gender, challenges of representing gender. Spaces of femininity, masculinity, and sexuality. P/NP or letter grading.

M147A. Psychology of Lesbian Experience, (4) (Same as Lesbian, Gay, Bisexual, Transgender, and Queer Studies M147A and Psychology M147A.) Lecture, four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of selected aspects of the psychological experience of lesbians. P/NP or letter grading. M147B. History of Women in Colonial British America and Early U.S., 1600 to 1860, (4) (Same as History M147B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to major themes in history of early American women from initial contact of English and American colonizers in early 17th century to rise of women's rights movement in mid-19th century. P/NP or letter grading.

M147C. Transnational Women's Organizing in Americas, (4) (Same as Chicana and Chicano Studies M147C.) Lecture, three hours. Study of three decades of transnational organizing. Examination of gender and race as central to processes of globalization and essential to economic and political struggles across borders. How have intersecting forms of race, gender, and feminism transformed movements of transnational organizing? Explo- ration of how questions of race and gender influence global economic policies and impact local actors and their communities. In time when people, capital, cultures, and technologies cross national borders with growing frequency, discussion of process of acceler- ated globalization has been linked to feminization of labor and migration, environmental degradation, questions of diaspora, sexuality, and cultural displacement, as well as growing global militarization. Problems and issues created by globalization and cultural, social, and political responses envisioned by transnational organizing. P/NP or letter grading.

M147D. History of Women in U.S., 1860 to 1980, (4) (Same as History M147D.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to major themes in his- tory of American women from abolition of slavery and Civil War to rise and consequences of second-wave feminism. P/NP or letter grading.


M149. Media, Gender, Race, Class, and Sexuality, (9) (Same as Communication M149 and Labor and Workplace Studies M149.) Lecture, four hours; activity, one hour. Limited to junior/senior Communication Studies and Gender Studies majors and Labor and Workplace Studies minors. Examination of manner in which media culture induces people to perceive various dominant and dominated and/or colo- nized groups of people. Ways in which women, gay, lesbian, bisexual, transgender, and other marginalized peoples, classes, relations, and other sub-altern or subordinate groups are presented and often constructed in media. Employment of practical applications of communications and feminist theories for understanding ideological nature of stereotyping and politics of representation through use of media, guest presentations, lectures, class discussions, and readings. Introduction to theory and practice of cultural studies. Letter grading.


M154Q. Selected Topics in Gender Systems, (4) (Formerly numbered M154Q.) (Same as Anthropology M154Q.) Lecture, three hours. Recommended prepa- ration: prior anthropology or gender studies courses. Discussion of gender systems in global context. Comparative study of women's lives and gender sys- tems and cultures from anthropological perspective. Course material is drawn from the anthro- pology, case study, and presentations. Consult Schedule of Classes for topics and instructors. May be repeated for credit with topic change. P/NP or letter grading.

M154R. Women and Social Movements, (4) (Formerly numbered M154Q.) (Same as Anthropology M154R.) Lecture/discussion, three hours. Recommended preparation: prior gender studies or anthro- pology courses. Comparative study of women's social move- ments (e.g., nationalist, socialist, liberal/reform), be- ginning with Russia and China including Cuba, Algeria, Guinea-Bissau, Mozambique, Nicaragua, and Iraq. Comparison of women's participation in emergence and role of law. How have intersecting forms of op- pressed people, class relations, and other sub-altern groups been presented and often constructed in media. Employment of practical applications of communications and feminist theories for understanding ideological nature of stereotyping and politics of representation through use of media, guest presentations, lectures, class discussions, and readings. Introduction to theory and practice of cultural studies. Letter grading.

M154T. Women's Voices: Their Critique of Anthropology of Japan, (4) (Formerly numbered M153T.) (Same as Anthropology M154T.) Lecture, three hours. Preparation: introductory sociocultural anthropology course. The anthropology of Japan has long viewed Japan as a homogeneous whole. Restoration of diversity and contradiction in it by listening to voices of Japanese women in various historical contexts. P/NP or letter grading.

M154T. Women's Voices: Their Critique of Anthropology of Japan, (4) (Formerly numbered M153T.) (Same as Anthropology M154T.) Lecture, three hours. Preparation: introductory sociocultural anthropology course. The anthropology of Japan has long viewed Japan as a homogeneous whole. Restoration of diversity and contradiction in it by listening to voices of Japanese women in various historical contexts. P/NP or letter grading.

M154T. Women's Voices: Their Critique of Anthropology of Japan, (4) (Formerly numbered M153T.) (Same as Anthropology M154T.) Lecture, three hours. Preparation: introductory sociocultural anthropology course. The anthropology of Japan has long viewed Japan as a homogeneous whole. Restoration of diversity and contradiction in it by listening to voices of Japanese women in various historical contexts. P/NP or letter grading.

M155A. History of Women in the U.S.: Rebellious Women of 20th Century, (4) Lecture, three hours. Limited to juniors/seniors. Introduction to major and minor figures and movements for social change in the U.S., including themes from politics, sports, civil re- bellions, and body. Examination of dramatic chal- lenges to gender roles over course of the 20th century through actions of rebellious women who led way for myriad of changes in women's lives. Offered in summer only. P/NP or letter grading.

M157. Chicana Histography, (4) (Same as Chica- cana and Chicano Studies M157 and History M151D.) Lecture, four hours. Examination of Chicana histo- rigraphy, looking closely at how practice of writing history has displaced Chicanas into particular narratives. Using Chicana feminist approaches to study of his- tory, revisiting of specific historical periods and mo-
ments such as Spanish Conquest, Mexican Period, American Conquest, Mexican Revolution, and Chi- cano Movement to excavate untold stories about women’s participation in and contribution to making of Chicana and Chicano history. P/NP or letter grading.

M158. Women, Gender, and Disability in Culture. (4) [Same as Italian M158.] Lecture, three hours; discussion, one hour. Analysis of gender roles, images of femininity and masculinity, patriarchy, myths of Madonna and Latin lover, condition of women in Italian society through history, politics, liter- ature, film, and other media. Italian majors required to read texts in Italian. P/NP or letter grading.

M159. Psychology and Evolution. (4) [Same as Communication M159.] Lecture, three hours. Discussion of theories and research on why pornography ex- ists and its effects. Use of topic to illustrate value of evolutionary theory to social sciences generally. Letter grading.

M161. Sports, Normativity, and Body. (4) [Same as Disability Studies M161.] Lecture, four hours. Since creation of International Olympic Committee in 1894, athletes with disabilities have been denied formal opportunities to compete with able-bodied athletes. Overview of some major topics of discussion concerning intersections of athletic competition and disability, including some comparative material. Particular emphasis on analysis of causes and consequences of job segregation by gender and of wage inequality. P/NP or letter grading.

M162. Sociology of Gender. (5) [Same as Sociology M162.] Lecture, three hours; discussion, one hour. En- forced prerequisite: course 10 or Sociology 1. Examina- tion of processes by which gender is socially con- structed. Topics include distinction between biological sex and sociological gender, causes and consequences of gender inequality and recent changes in gender relations in modern industrial soci- eties. P/NP or letter grading.

M163. Gender and Work. (4) [Same as Sociology M163.] Lecture, three hours. Requisite: course 10 or Sociology 1. Exploration of relationship of gender to work, concentrating on the U.S. experience but also including some comparative material. Particular em- phasis on analysis of causes and consequences of job segregation by gender and of wage inequality. P/NP or letter grading.

M164. Politics of Reproduction. (4) [Same as So- ciology M164.] Lecture, three hours; discussion, one hour. The interaction between political, social, and economic forces which impact on interper- sonal relationships of Afro-American women as mem- bers of large society and as members of their biolog- ical and ethnic group. P/NP or letter grading.

M165. Psychology of Gender. (4) [Same as Psychol- ogy M165.] Lecture, three hours. Consideration of psychological literature relevant to understanding contemporary sex differences. Topics include sex-role development and role conflict, physiological and per- sonality differences between men and women, sex differences in intellectual abilities and achievement, and impact of gender on social interaction. P/NP or letter grading.

M167. Contested Sexualities. (4) [Same as Lesbian, Gay, Gender, and Policing M167.] Lecture, three hours; discussion, one hour. Sociological perspectives on formation, control, and resistance of lesbian, gay, bisexual, and trans- gendered identities and practices. Topics include identity and community; age, class, gender, and racial diversity; and analysis of contemporary issues affecting con- tested sexualities. Letter grading.

168. Feminist Economics in Globalizing World. (4) Lecture, four hours. Preparation: satisfaction of Let- ters and Science Writing II requirement. Requisite: course 10. Designed for juniors/seniors. Overview of field of feminist economics, with emphasis on develop- ment experiences in globalizing world economy. Overview of gender inequalities such as gender divi- sion of labor in paid and unpaid work, patterns of em- ployment and unemployment, and wage gaps be- tween men and women in different world economy re- gions; feminist critiques of economics and of theoreti- cal debates within gender and development field on topics such as structural adjustment; femini- zation of labor and examination of eff- forts and proposals by governments, international policy-making institutions, and civil society organiza- tions to make economic policies and structures gender-equitable. P/NP or letter grading.

CM170. Alternate Traditions: In Search of Female Voices in Contemporary Literature. (5) [Same as Comparative Literature CM170.] Seminar, three hours. Designed for upper-division literature majors. Investi- gation of narrative texts by contemporary French, German, English, American, Spanish American, Af- rican, and Asian women writers from cross-cultural perspective. Gender, sexualities, and problems and issues. Concurrently scheduled with course CM270. P/NP or letter grading.

M170C. History of Women in China, A.D. 1000 to Present. (4) [Same as History M170C.] Lecture, three hours; discussion (one hour scheduled). De- signed for juniors/seniors. Topics include women and family, women in Confucian ideology, women in literat- ural culture, feminist movement, and women and commu- nist revolution in China. P/NP or letter grading.

M171A. Women, Gender, and Law: Jurisprudence of Sexual Equality. (4) Lecture, four hours. Enforced prerequisite: course 10 or 102 or 103 or 104. Exploration of problems of women in and of themselves but in light of larger systems of oppression, with focus on Filipino, Vietnamese, Sin- gaporean, and South Asian cultures. Letter grading.

CM171. Afro-American Woman in U.S. (4) [Same as African American Studies M171 and Psychology M172.] Lecture, two and one half hours. Designed for juniors/seniors. Impact of social, psychological, polit- ical, and economic forces on interper- sonal relationships of Afro-American women as mem- bers of large society and as members of their biolog- ical and ethnic group. P/NP or letter grading.

M173B. Women in 20th-Century Japan. (4) [Same as History M173B.] Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/se- niors. Japanese women in Japanese and world his- tory through state documents, autobiographical voices, contemporary television, and other varying historical sources, including topics such as women and new political order (1900 to 1930), women, war, and empire (1930 to 1945), and women in consumer society (1980s). P/NP or letter grading.

M174. Sociology of Family. (4) [Same as Sociology M174.] Lecture; three hours; discussion, one hour. Theory and research dealing with modern family, its structure, and functions, including historical changes, intergenerational family dynamics, and influ- ence of contemporary society on family. P/NP or letter grading.

M175. Women and Cities. (4) [Same as Urban Plan- ning M175.] Lecture, three hours. Limited to juniors/ seniors. Examination of relationship between women and cities: (1) how cities have affected women’s oppor- tunities for economic and social equality, (2) women’s contributions to development of U.S. cities, and (3) contemporary strategies and efforts to create urban environments that reflect women’s needs and interests. P/NP or letter grading.


M180B. Historical Perspectives on Gender and Science. (4) [Same as History M180B.] Lecture, three hours; discussion, one hour (when scheduled). De- signed for juniors/seniors. Historical cases illustrating how gender enters practices and concepts of sci- ence. Topics include gendered conceptions of nature, persona of man of science, role of women in scientific revolution, scientific investigations of women and gender. P/NP or letter grading.

185. Special Topics in Gender Studies. (4) Lecture, three hours. Preparation: prior gender studies course. Designed for juniors/seniors. Specialized or advanced study in a subfield within gender studies. May be repeated for credit with topic and/or instructor change. P/NP or letter grading.

CM186. Voices of Women in Nordic Literature. (4) [Same as Scandinavian CM144A.] Seminar, three hours; discussion (one hour scheduled). Requisite: Scandinavian 5 or 15 or 25. Knowledge of Scandinavian languages not required for non- majors. Readings and discussion of writings by Scan- dinavian women writers analyzed in historical, theo- retical, sociological, and comparative contexts. P/NP or letter grading.

CM186A. Gender and Prehistory to 1792. (4) [Same as History M186A.] Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of history of women, gender, and sexuality from prehistory to 1792. First half deals with period before written history and asks when did gender appear? How and why did patri- archy develop? Topics include women’s bodies, appearance of gender, women’s contribution to Neolithic revolution, significance of Goddess arts, sexualities, myths, and women and sexuality in dif- ferent traditions. Consideration of evidence of European conquest on Mesoamerican women, women’s power in monarchies, gender dimensions of Atlantic slavery, and first manifestations of feminist consciousness in second half. Objects or texts created by women ex- amined or read throughout. P/NP or letter grading.

M186B. Global Feminism, 1850 to Present. (4) [Same as History M186B.] Lecture, three hours; dis- cussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to movements for women’s rights (educational, political, economic, sexual, and reproductive) around world and over one and one half centuries. P/NP or letter grading.

187. Senior Research Seminar: Gender Studies. (4) Seminar, three hours. Requisites: courses 10, 102, 103, 104. Designed for advanced junior/senior Gender Studies majors or minors. In-depth study of major theme in feminist research. Themes vary by in- structor and term. Students pursue independent re- search related to course theme, with guidance from instructor, then share and critique other student works in progress. Letter grading.

CM191D. Topics in Queer Literatures and Cultures. (4) [Same as English CM191D and Lesbian, Gay, Bi- sexual, Transgender, and Queer Studies CM191D.] Seminar, three or four hours. Enforced requisite. Eng- lish Composition 3. Consult Schedule of Classes for author, period, genre, or subject to be studied in spe- cific term. May be repeated for credit with topic or in- structor change. P/NP or letter grading.
M191E. Topics in Gender and Sexuality. (5) (Same as English M191E and Lesbian, Gay, Bisexual, Transgender, and Queer Studies M191E.) Seminar, three or four hours. Enforced requisite: English Composition 3. Consult Schedule of Classes for author, period, genre, or subject to be studied the following term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

195. Community or Corporate Internships in Gender Studies. (4) Hours. Seminar, three or four hours. Individual contract required. Letter grading. Open to juniors/seniors. Internship in community setting, or business, which has been approved by program. Content of student work must apply gender analysis or be focused on some aspect of gender studies. Students meet on regular basis with instructor; provide periodic reports on their experience on-site, and submit final report. Must be taken for 4 letter-graded units to be applied toward Gender Studies major or minor. May be repeated for maximum of 8 units. Individual contract with supervising faculty member required. P/NP or letter grading.

M195CE. Comparative Approaches to Community and Corporate Internships. (4) (Same as African American Studies M195CE, African American Studies M195CE, and Chicana and Chicano Studies M195CE.) Tutorial, one hour; fieldwork, eight to 10 hours. Limited to juniors/seniors. Internship in corporate, governmental, or nonprofit setting coordinated through Center For Community Learning. Comparative study of race, gender, and indigeneity in relation to contemporary workplace dynamics. Students complete weekly written assignment of at least one half hour. Individual contract with supervising faculty member required. P/NP or letter grading.

197. Individual Studies in Gender Studies. (4) Tutorial, one or two or four hours. Limited to two or four hours. Individual contract required. May be repeated for credit with topic or instructor change. Letter grading.

198A-198B. Honors Research in Gender Studies. (4-4-4) Tutorial, four hours. Limited to junior/senior gender studies program students. Three-term sequence to research and write honors thesis under direct supervision of faculty sponsor and in consultation with faculty cosponsor. Individual contract required. 198A. Requisite: course 187. Letter grading. 198B. Enforced requisite: course 198A. In Progress grading (credit to be given only on completion of course 198C). 198C. Enforced requisite: courses 198A and 198B. Letter grading.

199. Directed Research in Gender Studies. (2 or 4) Tutorial, to be arranged. Preparation: at least two upper-division gender studies courses, minimum 3.0 grade-point average. Requisite: course 102 or 103 or 104. Limited to junior/senior Gender Studies majors and minors. Supervised individual research or investigation under guidance of faculty mentor on specific topic within gender studies. Culminating paper or project required. May be repeated for credit. Individual contract required. Letter grading.

Graduate Courses

201. Introduction to Interdisciplinary Methods in Gender Studies. (4) Seminar, three hours. Presentation by faculty members of approaches to interdisciplinary studies and discussion of their own research. Demystification of methods, particularly of interdisciplinary studies, in terms of their application to ongoing faculty research and to incorporate questions of ethics. Focus on interdisciplinary gender research that intervenes in knowledge production. Particular issues include approaches to interdisciplinary methods of research, introduction to feminist intersectional and queer theories, effective use of reflexivity and positionality in research and writing, and incorporating ethics and diversity into course methods and teaching. May be repeated once for credit with instructor change. Letter grading.

202. Key Theories and Concepts in Gender Studies. (4) Seminar, four hours. Seminar in the intersection of debates in field to key intellectual and social movements (such as Marxism, poststructuralism, critical race studies, queer studies, indigenous studies, and postcolonialism) that have elicited feminist critiques and contributed to development in feminist thought. Issues include analysis of central theoretical works in field and survey of key methodological, examination of key concepts and debates in gender studies, and identification of debates that have generated key analytics in feminist analysis and gender studies scholarship. May be repeated once for credit with instructor change. Letter grading.

203. Epistemologies of Gender. (4) Lecture/discussion, three hours. Focus on debates concerning methods of inquiry in gender and sexuality studies and exploration of intersections of feminist studies, masculinity studies, and gender studies. Debates and interventions concern interdisciplinary, intersectional feminist methods and changing boundaries of field over time. Exploration of critical tools to utilize in interrogating assumptions to be made of feminist analyses. Examination of how feminisms have shaped and been shaped by processes of knowledge-production within and across disciplinary boundaries, cultures, and paradigms, and importance of intersectional, standpoint, and queer theory as critical research tools and as responses to issues of power, domination, oppression, and other icoi of identities and difference. May be repeated once for credit with instructor change. Letter grading.

204. Research Design and Professional Development. (4) Seminar, three hours. Required of third-year gender studies graduate students. Graduate students are to be taken after all other coursework is complete; primarily geared toward proposal writing for dissertations and outside grants. Process of constructing dissertation proposals by providing structured process of research, methods, and developing professional development for students as they prepare to enter academia or other professions. Help in preparation for job interview processes, exploration of job/interview process, development of materials to assist in teaching, and analysis of various job markets. May be repeated once for credit with instructor change. Letter grading.

205. Subfields in Gender Studies. (4) Seminar, three hours. Departmental topics course that offers in-depth exploration of subfields of gender studies. Topics may range from issues of social inequality, women and the economy, ideational systems, and social inequality. May be repeated for credit with instructor change. Letter grading.

210. Topics in Women and Public Policy. (4) Lecture, four hours. Designed for graduate gender studies students. Introduction to background, decision-making processes, and current debates over public policy directly affecting women in one or more major sectors of public life (e.g., work, family, political system, healthcare, legal regulation). Topics may focus on public health, political science, medicine, workplace studies, and social welfare. May be repeated for credit with topic or instructor change. Letter grading.

215. Topics in Study of Sexuality and Gender. (4) Seminar, three to four hours. Designed for graduate students with appropriate background in aspects of sexual orientation, gender identity, and gender and trans-gender theory, interdisciplinary research on minority sexualities, and social construction/deconstruction of gender. May be repeated for credit with topic or instructor change. Letter grading.

220. Cultural Studies in Gender, Race, and Sexual- ity. (4) Seminar, three hours. Designed for graduate students. In-depth study of representations of gender and sexuality in social and cultural expressions, with special attention to race. Topics include flow of artistic cultural production across national borders, theorizing femqueen as diasporic or multicultural formation. Letter grading.

CM232A. Chicana Feminism. (4) (Same as Chicana and Chicano Studies CM214.) Lecture, four hours. Enforced requisite: course 10 or Chicana and Chicano Studies 10A. Examination of theories and practices of women who identify as Chicana feminist. Analysis of writings of Chicanas who do not identify as feminist but whose practices attentive to gender inequities faced by Chicanas both within Chicana/Chicana community and dominant society. Attention to Anglo-European and Third World women. Concurrent scheduled with course CM132A. S/U or letter grading.

M238. Feminist Theory. (4) (Same as Sociology M238.) Seminar, three hours. Designed for graduate students. Analysis of current feminist theory relevant to sociologists. Exploration of critiques of second wave feminism by working class feminists and/or feminists of color, feminist scholars from other countries, and recent “antifeminist” feminists. Discussion of directions for future feminist sociology. Letter grading.


M252. Selected Topics in Sociology of Gender. (4) (Same as Sociology M252.) Lecture, two hours; discussion, two hours. Designed for graduate students. Seminar on selected topics in sociology of gender. May be repeated for credit. Letter grading.

M253A. Seminar: Current Problems in Compara- tive Education. (4) (Same as Education M253A.) Seminar, four hours. Examination of some of most in- fluential critical theorists, including Marx, Nietzsche, Freud, Marcuse, Foucault, Fanon, and de Beauvoir and their contributions to critique of contemporary education, society, and politics. S/U or letter grading.


M259A-M259B. History of Women. (4-4) (Same as History M259A-M259B.) Seminar, four hours. Enforced requisite: course 10 or Chicana and Chicano Studies 10A. Lecture/discussion, four hours. Enforced requisite: course 10 or Chicana and Chicano Studies 10A. Examination of limitations of conventional social sciences theories and methodologies to feminist standpoint theory, distinctive critical theory methodology now widely used in social sciences. Letter grading.

M261. Gender and Music in Cross-Cultural Per- spective. (4) (Same as Ethnomusicology M261.) Seminar, three hours. Designed to foster in-depth un- derstanding of gender in study of music as culture. Topics range from ethnography of gender and sexu- ality, (de)codification of messages of resistance, and gender representation to gendered politics via mu- sical production. S/U or letter grading.

M263. Gender Systems. (4) (Formerly numbered M263.) (Same as Anthropology M263.) Seminar, three hours. Current theoretical developments in un- derstanding gender systems cross-culturally, with emphasis on relationship between systems of gender, ethnic, religious, and social inequality. Selection of ethnographic cases from recent litera- ture. S/U or letter grading.

M266. Feminist Theory and Social Sciences Re- search. (4) (Same as Sociology M266.) Lecture, four hours. Examination of how diverse feminist social theories of last quarter century have both challenged and strengthened conventional social sciences theories and methodologies. Emphasis on feminist standpoint theory, distinctive criticism methodology now widely used in social sciences. Letter grading.
CM270. Alternate Traditions: In Search of Female Voices in Contemporary Literature. (Same as Comparative Literature CM270.) Seminar, four hours. Designed for graduate students. Investigation of narrative texts by contemporary French, German, English, American, Spanish American, African, and Asian women writers from cross-cultural perspective. Common themes, problems, and techniques. Concurrently scheduled with course CM170. S/U or letter grading.

CM278. Critical Media Literacy and Politics of Gender: Theory and Production. (Same as Education CM278.) Seminar, three hours. Corequisite: course CM278L. Use of range of pedagogical approaches to theory and practice of critical media literacy that necessarily involves understanding of new technologies and media forms. Study of both theory and production techniques to inform student analysis of media and critical media literacy projects. Concurrently scheduled with course CM178, Letter grading.

CM278L. Critical Media Literacy and Politics of Gender: Laboratory. (Same as Education CM278L.) Laboratory, two hours. Corequisite: course CM278. Hands-on production experience as integral component of course CM278. Concurrently scheduled with course CM178L. Letter grading.

285. Special Topics in Women's Studies. (4) Lecture/discussion, four hours. Designed for graduate students. Selected topics or special problems. In-depth study of aspects of feminist theory or research methods or gender analysis within disciplinary studies in social sciences, humanities, health sciences, arts, or professional programs. May be repeated for credit with topic or instructor change. Letter grading.

296. Doctoral Roundtable. (2) Research group meets two hours. Preparation: satisfactory completion of PhD program first year. Requisites; at least two courses from 201, 202, 203, 210. Limited to program PhD students. Interactive seminar with focus on disciplinary and interdisciplinary issues, feminist scholarship, research presentation, and professional development. May be repeated for credit. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Requisite or corequisite: course 495. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Feminist Pedagogy. (2) Seminar, two hours. Preparation: appointment as teaching assistant in department. Introduction to feminist methods of teaching with emphasis on reciprocity and dialogue and de-emphasis on hierarchy. Required of students while serving as teaching assistants (first time only) in undergraduate gender studies courses. May be repeated for credit. S/U grading.


GEOGRAPHY

College of Letters and Science
1255 Bunche Hall
Box 951524
Los Angeles, CA 90095-1524
310-825-1071
http://www.geog.ucla.edu

Laurence C. Smith, PhD, Chair

Professors
John A. Agnew, PhD
Stephen A. Bell, PhD
Judith A. Carney, PhD
Jared M. Diamond, PhD
C. Cindy Fan, PhD
Thomas W. Gillespie, PhD
Susanna B. Hecht, PhD
Helga M. Leitner, PhD
Dennis P. Lettenmaier, PhD
Glen M. MacDonald, PhD (John Muir Memorial Endowed Professor of Geography)
Gregory S. Okin, PhD
Marilson N. Rapoohl, PhD
David L. Rigby, PhD
Ananya Roy, PhD
Yongweil Sheng, PhD
Eric S. Shepard, PhD (Alexander von Humboldt Endowed Professor of Geography)
Lawrence C. Smith, PhD
Michael C. Storper, PhD
Yongkang Xue, PhD

Professors Emeriti
Charles F. Bennett, Jr., PhD
William A.V. Clark, PhD
Michael R. Curry, PhD
J. Nicholas Entrikin, PhD
Gerry A. Hale, PhD
Antony R. Orme, PhD
Melissa Savage, PhD
Allan J. Scott, PhD
Werner H. Terjung, PhD
Norman J.W. Thrower, PhD
Stanley W. Trimbile, PhD
Hartmut S. Walter, PhD

Associate Professors
Libia B. Faier, PhD
Adam D. Moore, PhD
Michael E. Shin, PhD

Assistant Professors
Kyle C. Cavanaugh, PhD
Daniela F. Cusack, PhD
Jamie M. Goodwin-White, PhD
Juan C. Herrera, PhD
Kelly A. Kay, PhD
Shaina S. Potts, PhD

Adjunct Assistant Professor
Thomas H. Painter, PhD

Scope and Objectives

Geography is the study of the natural world and how humans have changed it. It examines the physical Earth and life on it, looking at the world’s diverse cultures and economies and at the environmental problems they produce.

Geography addresses many issues about the contemporary world. Some are local, such as documenting the development of ethnic neigh-
ronmental, physical, or biogeography. They should consult with the undergraduate adviser to plan a program suitable to their personal objectives.

Preparation for the Major

Required: Three courses (15 units) as follows: Geography 1 or 2, 3 or 4 or 6, and Statistics 12. Each course must be taken for a letter grade.

Transfer Students

Transfer applicants to the Geography major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one physical geography or biogeography course, one cultural geography or economic geography course, and one statistics course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Eleven upper-division geography courses, each taken for a letter grade, that must be distributed as follows: (1) environmental studies and natural systems core—six courses from 100, 101, 102, 104, 105, M106, M107, 108, M109, 110, 111, 112, 113, 114, M115, 116, M117, 122, 123, 124, 125, 126, M127, M128, 129, M131, 132, 135, M137, 159C, 159D, 159E; (2) human systems core—two courses from 118, 133, 138, 140, 141, 142, 143, 144, 145, M146, 147, 148, M149, 150, 151, M153, 155, 159A, 159B; (3) procedures—two courses from 162, 163, 166, 167, 168, 169, 170, M171, 172, 173, 174, 177; and (4) regions—one course from 119, 139, 145, 152, 156, 158, 180, 181, 182A, 182B, 183, 184, 185, or 186. Each course must be taken for a letter grade.

Geography/Environmental Studies majors are advised to complete the required courses in the human systems core before taking courses in the environmental studies and natural systems core.

Honors Program

The departmental honors program is designed for Geography and Geography/Environmental Studies majors who are interested in completing a research project that culminates in an honors thesis.

To qualify for graduation with departmental honors, students must have a cumulative grade-point average of 3.5 or better in all upper-division geography courses and a 3.0 overall GPA. They must enroll in Geography 98A and 98B in two consecutive terms and earn grades of A– or better. They may elect to work with one or two faculty sponsors. Students are awarded highest honors, honors, or no honors based on an evaluation of the thesis by the faculty sponsor(s). Contact the department advising office for further information.

Geography Minor

The Geography minor is designed for students who wish to deepen and/or broaden their major program of study with a distinctive yet flexible program of courses encompassing the relationship between environment and society. The minor allows students to develop a coherent strategy for understanding and explaining the manner in which people and the Earth interact. Students have the opportunity to explore the origins, development, morphology, and processes of landscapes inherited from nature, as well as those institutions and cultural, economic, political, and social patterns associated with the human development, occupancy, organization, perception, and use of these landscapes.

To enter the minor, students must have an overall grade-point average of 2.0 or better and file a petition in the Geography Department Advising Office, 1255 Bunche Hall, 310-825-1166. Courses should be selected in consultation with the departmental adviser.

Required Lower-Division Courses (10 units):

Two courses from Geography 1, 2, 3, 4, 6. It is recommended that students take these courses before attempting upper-division courses.

Required Upper-Division Courses (20 units):

Any five upper-division geography courses, with a few exceptions. Contact the advising office for more information.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor, and at least three of the five upper-division courses must be taken in residence at UCLA. Transfer credit for any of the above is subject to departmental approval.

Each minor course must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.

Geography/Environmental Studies Minor

The Geography/Environmental Studies minor is intended for students interested in environmental issues and emphasizes a systems approach to gaining a causal understanding of major environmental problems facing our society and the world at large. The uniqueness of the minor lies in its geographical perspective on the impact, at various geographical scales, of human activity on natural systems and on the implications of global environmental change on local, regional, and global human systems.

To enter the minor, students must have an overall grade-point average of 2.0 or better and file a petition in the Geography Department Advising Office, 1255 Bunche Hall, 310-825-1166. Courses should be selected in consultation with the departmental adviser.

Required Lower-Division Courses (10 units):

Geography 5 and one course from 1, 2, 3, 4, or 6. It is recommended that students take these courses before attempting upper-division courses.

Required Upper-Division Courses (20 units):

Three courses from the environmental studies cluster specified within the major and two geography courses from outside the environmental studies cluster.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor, and at least three of the five upper-division courses must be taken in residence at UCLA. Transfer credit for any of the above is subject to departmental approval.

Each minor course must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.

Geospatial Information Systems and Technologies Minor

The Geospatial Information Systems and Technologies minor is designed to provide students with a strong background in the use, application, and development of geospatial/environmental research techniques and methods.
Geography

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Geography offers Master of Arts (MA), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Geography.

Geography

Lower-Division Courses

1. Earth’s Physical Environment. (5) Lecture, three hours; laboratory, two hours. Study of Earth’s physical environment, with particular reference to nature and distribution of landforms and climate and their signifi-
cance to people. P/NP or letter grading.

2. Biodiversity in Changing World. (6) Lecture, three hours; discussion, two hours. Biogeographical explora-
tion of plant and animal diversity and conservation is-
sues on continents and islands around world. Study of physical, biotic, and human factors responsible for evolution, persistence, and extinction of species and ecological communities. Analysis of effects of human activity. P/NP or letter grading.

3. Cultural Geography. (5) Lecture, three hours; dis-
cussion, two hours. Introduction to cultural geo-
graphy of modern world, with examination of key con-
cepts of space, place, and landscape as these have been and are being shaped by connections between societies and their natural environments. Examples from variety of landscapes and places since 1800 and especially from Los Angeles region. P/NP or letter grading.

4. Globalization: Regional Development and World Economy. (5) Lecture, three hours; discussion, one hour. Economic geography explores spatial distribution of all forms of human productive activity at number of geographical scales—local, regional, na-
tional, and global. Key theme is impact of increasingly powerful global economic forces on organization of production. P/NP or letter grading.

5. People and Earth’s Ecosystems. (5) Lecture, three hours; laboratory, two hours. Exploration of ways in which human activity impacts natural environ-
ment and how modification of environment can eventu-
ally have significant consequences for human ac-
tivity. Examination, using case studies, of real environ-
mental problems that confront us today. P/NP or letter grading.

6. World Regions: Concepts and Contemporary Is-
sues. (5) Lecture, three hours; discussion, two hours. Interdisciplinary and historical approach to modern peoples, their ecology, economy, poverty, and their local origins of food production. Brief introd-
uction to physical geography and biogeography of each region. Discussion of each region’s peoples, lan-
guages, foods, prehistories, and histories. Letter grading.

7. Introduction to Geographic Information Sys-
tems. (5) Lecture, three hours; laboratory, two hours. Designed for freshmen/sophomores. Introduction to fundamental concepts necessary to carry out sound geographic analysis with geographic information systems (GIS). Reinforcement of key is-
sues in GIS, such as geographic coordinate systems, map projections, spatial analysis and visualization, and spatial data. Laboratory exercises use database query, manipulation, and spatial analysis to address real-world problems. P/NP or letter grading.

88G. Lower-Division Seminars: Geography. (4 each) Discussion, three hours; reading period, one hour. Seminars designed to explore various themes and issues pertinent to environment and people. Seminar topics advertised in department during pre-
vious term. P/NP or letter grading.

88GE. Seminar Sequence: Special Topics in Geo-
graphy. (5) Seminar, three hours. Enforced requisite: course S. Designed for sophomores/juniors. Explora-
tion of aspects of lecture topic through readings, im-
ages, and discussions. P/NP or letter grading.

Upper-Division Courses

100. Principles of Geomorphology. (4) Lecture, three hours; reading period, one hour. Required: course 1. Recommended: course 100A. Study of pro-
cesses that shape world’s landforms, with emphasis on weathering, mass movement and fluvial erosion, transport, deposition; energy and material transfers; space and time considerations. P/NP or letter grading.

101. Coastal Geomorphology. (4) Lecture, three hours; reading period, one hour. Required: course 1. Recommended: course 101A. Study of origin and de-
velopment of coastal environments, with emphasis on past and present changes, hydrodynamic processes, sediment transfers, and such features as beaches, estuaries, lagoons, deltas, wetlands, dunes, seascapes, and coral reefs, together with coastal zone manage-
ment. P/NP or letter grading.

102. Tropical Climatology. (4) Lecture, three hours; reading period, one hour. Required: course 1. In-depth exploration of development of tropical cli-
mate, with special reference to hurricanes, ENSO, and monsoons. Examination of human interaction with tropical climate processes and human-induced climate change in tropics. Use of climatological infor-
mation to foster sound environmental management of climate-related resources in tropics. P/NP or letter grading.

104. Climatology. (4) Lecture, three hours; reading period, one hour. Required: course 1. Examination of mass processes in context of climate and world of man. Application of basic energy budget concepts to microclimates of relevance to ecosystems of agri-
culture, animals, man, and urban places. P/NP or letter grading.


105A. Hydrosys: Field and Laboratory. (2) Labora-
tory/fieldwork, six hours. Corequisite: course 105. Field and laboratory investigations into role of water in geographic systems: hydrologic phenomena in rela-
tion to climate, landforms, soils, vegetation, and cul-
tural processes and how modification of environment can eventu-
ally have significant consequences for human ac-
tivity. Examination, using case studies, of real environ-
mental problems that confront us today. P/NP or letter grading.

M105. Applied Climatology: Principles of Climate Impact on Natural Environment. (4) (Same as At-
mospheric and Oceanic Sciences M106.) Lecture, three hours; discussion, one hour. Designed for ju-
niors/seniors. Exploration of knowledge and tools to solve complex problems in contemporary applied cli-
matology, including current practices, influence of cli-
mate on environment, and human influence on cli-
mate, and changing climates. P/NP or letter grading.

M107. Soil and Water Conservation. (4) (Same as Environment M114.) Lecture, three hours; discussion, one hour. Enforced requisite: course 1 or 2 or Life Sci-
ciences 1 or 3. Designed for juniors/seniors. Systematic study of processes of and hazards posed by erosion, sedimentation, development, and pollution and tech-niques needed to conserve soil and maintain environ-
mental quality. Scope includes agriculture, forestry, mining, and other rural uses of land. P/NP or letter grading.

108. World Vegetation. (4) Lecture, three hours; reading period, one hour. Designed for juniors/se-

M109. Human Impact on Biophysical Environment: What Science Has Learned. (4) (Same as Environ-
ment M109.) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Examination of his-
tory, mechanisms, and consequences of interactions between humans and environment. Exploration in depth of thematic topics (deforestation, deserti-
fication, and greenhouse gas emissions, ozone de-
pletion) and four major subjects (soil, biodiversity, water, and landforms). P/NP or letter grading.

110. Population and Natural Resources. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Examination of debate about environ-
mental change and ability of planet to maintain growing population. Introduction and evaluation of basic demographic processes in context of food pro-
duction, energy use, and environmental degradation. Discussion of major debates about use of resources in context of increasing population in developing countries and decreasing population in Western countries. P/NP or letter grading.

111. Forest Ecosystems. (4) Lecture, three hours; field trips. Required: course 2 or Life Sciences 1. De-
signed for juniors/seniors. Evaluation of ecological principles as they apply to forests. Emphasis on con-
straints of physical environment, biotic interactions, succession, disturbances, and long-term environ-
mental change. P/NP or letter grading.

tion areas. Focus on integration of and its im-
plications for biodiversity trends in natural and anthro-
pogonic environments. P/NP or letter grading.

113. Humid Tropics. (4) Lecture, three hours. Requi-
site: course 2 or 5 or Life Sciences 1. Designed for ju-
niors/seniors. Examination of humid tropics, with em-
phasis on rainforests, their ecological principles, and forms of land use. Letter grading.

114. Africa and African Diaspora in Americas. (4) Lecture, three hours. Designed for juniors/seniors. Historical-geographical examination of Africa’s role in Amer-
icas, with emphasis on environment, agriculture, food systems, and medicinal crops. P/NP or letter grading.

115. Environmentalism: Past, Present, and Fu-
ture. (4) (Same as Environment M132 and Urban Planning M165.) Lecture, three hours; discussion, one hour. Exploration of history and origin of major envi-
ronment, with particular reference to nature and distribution of landforms and climate and their significance to people. P/NP or letter grading. A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor. Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better in the minor. Successful completion of the minor is indicated on the transcript and diploma.
romental ideas, movements or countermovements they spawned, and new and changing nature of modern environmentalism. Introduction to early ideas of environment, how rise of modern sciences reshaped environmental thought, and how this was later transformed by 19th-century ideas and rise of American conservation movements. Review of politics of American environmental thought and contemporary environmental questions as they relate to broader study of our relation to nature: development, sustainability, and equity in environmental debate. Exploration of issues in broad context, including global climate change, rise of pandemics, deforestation, and environmental justice impacts of war. Letter grading.

116. Biogeography of Plant and Animal Invasions. (4) Lecture, three hours; reading period, one hour. Requisite: course 1 or 2 or 5. Examination of theories and examples of invasion of new environments by plants and animals introduced through natural processes or by human activity, P/NP or letter grading.

M117. Ecosystem Ecology. (4) Same as Ecology and Evolutionary Biology M131.) Lecture, three hours; field trips. Enforced requisite: course 1 or Life Sciences 2. Designed for juniors/seniors. Development of principles of ecosystem ecology, with focus on understanding ecosystem structure and function. Emphasis on energy and water balances, nutrient cycling, plant-soil-microbe interactions, landscape heterogeneity, and human disturbance to ecosystem processes. P/NP or letter grading.

118. Medical Geography. (4) Lecture, three hours; reading period, one hour. Requisite: course 5. Examination of patterns of population/place/disease interaction and some effects of change and development on disease etiology and problems of healthcare, P/NP or letter grading.

119. Biophysical and Social Transformations in Northern Regions. (4) Lecture, three hours. Enforced requisite: foundation course. Emphasis on spatial transformation of world’s northern high latitudes due to climate change, natural resource development, and key demographic trends in 21st century. Climate models project rising mean air temperatures and precipitation, and less ice-sea cover in Arctic Ocean, consistent with field observations of rising river flows, shrinking glaciers, and thawing permafrost. Ability of northern societies to react to these phenomena is shaped by new legal frameworks, like aboriginal land-claims agreements in North America, and resource economics, like oil and gas industry in West Siberia. Eight northern countries (including Canada and the United States) face multiple problems associated with natural resource use, Third World poverty, and environment. Analysis of global economic restructuring and its connection to changing organization of production and resulting environmental impacts. Case studies from Africa, Latin America, Asia, and U.S. P/NP or letter grading.


125. Health and Global Environment. (4) Lecture, three hours; reading period, one hour. Impact of environment and lifestyle on individual health examined from a geographic perspective, with examples from both developed and developing countries. P/NP or letter grading.


M127. Soils and Environment. (4) Same as Ecology and Evolutionary Biology M127 and Environment M127.) Lecture, three hours; discussion, one hour. Field trips. General treatment of soils and environmental implications: soil development, morphology, and worldwide distribution of soil orders; physical, chemical, hydrologic, and biological properties; water use, erosion, and pollution; management of soils as related to plant growth and distribution. P/NP or letter grading.


129. Seminar: Environmental Studies. (4) Seminar, three hours; reading period, two hours. Preparation: one course each from natural and human systems core, three environmental studies cluster courses. Limited to seniors. Qualitative/quantitative analysis of problems associated with natural protection and use of selected environmental systems (urban, rural, forest, desert, coastal, water, soil, or others). P/NP or letter grading.

130. Geographical Discovery and Exploration. (4) Lecture, three hours; reading period, one hour. Requisites: courses 1, 3. Designed for juniors/seniors. Survey of history of exploration from earliest times to modern, with emphasis on period from Marco Polo to present. P/NP or letter grading.

M131. Environmental Change. (4) (Same as Environment M130.) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Examination of natural forces producing environmental changes over the past two millennia. Landscape reflects past conditions. Effects of environmental change on people. Increasing importance of human activity in environmental modification. Focus on impact of natural and anthropogenic changes on forests. P/NP or letter grading.

132. Food and Environment. (4) Lecture, three hours. Designed for juniors/seniors. Thematic orientation to food systems and their role in environmental and cultural transformations. P/NP or letter grading.

133. Cultural Geography of Modern World. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Historical and structural approach to cultural geography of modern world system, with particular emphasis on structure and functioning of its core, semi-periphery, and periphery. P/NP or letter grading.


M137. Historical Geography of American Environment. (4) (Same as Environment M137.) Lecture, three hours. Designed for juniors/seniors. Study of systematic changes of natural environment in U.S. during historical time, with emphasis on interplay between and among natural factors of climate, soils, vegetation, and landforms, and human factors of settlement, economic activity, technology, and cultural traits. P/NP or letter grading.

138. Place, Identity, and Networked World. (4) Lecture, three hours; reading period, one hour. Communication technologies such as personal computers and Internet, seem to be connected to dramatic changes in identities of people, groups, and places. Exploration of those changes and their implications for future institutions and human values and practices. P/NP or letter grading.

139. Japan in World: Culture, Place, and Global Connections. (4) Lecture, three hours; reading period, one hour. Focus on questions of culture and place in Japan. Exploration of different questions—Japan itself has been shaped by historical and contemporary interactions involving people in both Japan and other parts of world. P/NP or letter grading.

140. Political Geography. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Spatiality of political activity, spatial constitution of political power, control over space as central component of political struggle. Studies at local, national, and global scales. P/NP or letter grading.

141. Uneven Development Geographies: Prosperity and Impoverishment in Third World. (4) Lecture, three hours. Geographies of these problems, contrast of globe commonly called Third World (global South). How development has shaped livelihood possibilities and practices, by global processes stretching back centuries and transforming Third World societies. P/NP or letter grading.

142. Population Geography. (4) Lecture, three hours; research, one hour. Designed for juniors/seniors. Study of social and behavioral perspectives influencing people in their patterns of demographic change, migration, and mobility, with special emphasis on spatial relations to and selected case studies. P/NP or letter grading.

143. Population in Interacting World. (4) Lecture, three hours. Provides multidisciplinary understanding of and appreciation for human population phenomena and problems in different parts of world and at different geographical scales—from local to global. Particular emphasis on understanding and critically reflecting on the population problems at global, national, and local scale, including both dramatic decline and persistence of high levels of fertility in parts of developing world, record low fertility and population aging in highly industrialized countries, increasing levels of international migration and refugee crisis, massive rural to urban migrations, and creation of mega-cities in less developed world, political actions to address these problems, including family planning policies to reduce fertility, immigration policies, and so on, and gender dimension of contemporary population problems and policies. P/NP or letter grading.

144. Ethnicity in American Cities. (4) Lecture, three hours; reading period, two hours. Limited to juniors/seniors. Designed to encourage and facilitate critical thinking about geographical aspects of ethnicity in contemporary America. Use of comparative perspective to examine changing distribution, social, economic, and political behavior, and adjustment problems among ethnic groups face in contemporary American cities. P/NP or letter grading.
145. Slavery and Human Trafficking. (4) Lecture, three hours; reading period, one hour. Enforced requisite: one course from 3, 4, Anthropology 9, Gender Studies 10, or Sociology 1. Limited to juniors/seniors. Exploration of how, why, and to what ends human trafficking has been conceptualized as global problem that warrants international response. Examination of recent activist, governmental, and religious and media responses, and reflection on what is and is not accomplished. Considerations of human trafficking are implicitly geographical, requiring consideration of ways freedom is spatially defined and how movement across borders is encouraged and regulated. How questions of race, labor, sexuality, national and cultural embodiment, representation, and governance pertain to human trafficking. What people mean when they speak of human trafficking as slavery. Meanings of slavery and freedom in world today using examples from U.S. and Europe, with focus on Philippines as case study for exploring both contemporary examples and historical forms of enslavement. P/NP or letter grading.

M114. Feminist Geography. (4) [Same as Gender Studies M114.] Lecture, three hours; discussion, one hour. Critical engagement of gender as concept of geographic inquiry. Gender as spatial process. Analysis of feminist geographic theory and methods, landscapes of gender, challenges of representing gender. Spaces of femininity, masculinity, and sexuality. P/NP or letter grading.

147. Social Geography. (4) Lecture, three hours; discussion, one hour. Study of spatiality of social differences such as race, class, gender, age, sexuality, location. Critical explorations of identity, social categories, and spatial structures. Importance of space and place in social life. P/NP or letter grading.


M149. Transportation Geography. (4) [Same as Urban Planning M150.] Lecture, three hours. Requisite: course 3 or 4. Designed for juniors/seniors. Study of geographical aspects of transportation, with focus on characteristics and functions of various modes and on complexities of intra-urban transport. P/NP or letter grading.


152. Cities of Europe. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Urbanization of Europe, growth of city systems and internal spatial structure, functions, and geographical problems of contemporary European cities. Particular attention to historical development and landscapes of capital cities such as Rome, Paris, and Berlin. P/NP or letter grading.

M153. Past People and Their Lessons for Our Own Future. (4) [Same as Anthropology M142 and Honors Collegium M152.] Lecture, two hours; discussion, two hours. Examination of modern and past people that met varying fates, as background to examination of how people are coping or failing to cope with similar issues. Letter grading.


156. Metropolitan Los Angeles. (4) Lecture, three hours; reading period, one hour. Designed for juniors/ seniors. Study of origins, growth processes, internal structure and pattern of metropolitan sprawl and spatial problems of Los Angeles metropolitan area. P/NP or letter grading.

158. Korean Urban Experience. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors with previous coursework in geography or East Asian studies. Study of cities by geographers entails analysis of evolution, functions, spatial patterns, and other geographical aspects of Korean cities throughout history. Examination of Korean urban experience as found in Seoul, South Korea, along with other cities in both Koreas and overseas where Korean diaspora resides. Korean experience to be juxtaposed against responses by other cities of world to similar challenges. Geography of housing and associated processes of urban redevelopment whereby built environment is continuously being reproduced and transformed. Current urban debates, as well as topics showing interplay between competing visions of city. P/NP or letter grading.

159A-159E. Problems in Geography. (4, each) Discussion of issues and problems in geography. Preparation: completion of three courses in one concentration. Limited to seniors. Seminar course in which students carry out intensive research projects developed from coursework or prior research. P/NP or letter grading.

159A. Urban and Regional Development Studies. 159B. Spatial Demography and Social Processes in Cities. 159C. Culture and Environment in Modern World. 159D. Physical Geography. 159E. Biogeography.

162. Glacial Environments of California’s High Sierra. (4) Fieldwork, 10 hours; discussion, four hours. Introduction to alpine glacial environment through three hours of introductory lecture followed by intensive seven-day field trip to California’s High Sierra. Students carry out laboratory exercises, as well as data collection for research projects designed around their individual interests. Presentation of additional evening lectures, using presentation facilities at Sierra Nevada Aquatic Research Laboratory, Nevada, or UC Davis. Offered in summer only. P/NP or letter grading.

163. Field Analysis in Biogeography. (4) Lecture, two hours; laboratory, two hours. Enforced requisite: course 4. Designed for juniors/seniors. Study of techniques used in observation, measurement, analysis, and interpretation of phenomena pertinent to biogeography and interrelated human influences. P/NP or letter grading.

164. Environmental Modeling. (4) Lecture, one hour; laboratory, two hours. Presentation of basic concepts related to computer modeling of biogeochemical cycles, geomorphological processes, and other phenomena relevant to changing Earth and its inhabitants. Laboratory exercises include building basic computer models and working with existing models. P/NP or letter grading.


167. Advanced Geographic Information Systems. (4) Lecture, two hours; laboratory, one hour. Enforced requisite: course 7. Introduction to fast-growing field of environmental monitoring from space. Application of satellite, radar, Global Positioning System (GPS), and Earth Observing System satellites to land-use change, oceanography, meteorology, and environmental monitoring. Introduction to digital image-processing and imaging geographic information systems (GIS) software. P/NP or letter grading.

170. Advanced Geographic Information Systems. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 169. Digital processing methods for manipulating and analyzing image data. Topics include statistical description, geometric and radiometric correction, classification, image enhancement and filtering, and change detection schemes. Recipes illustrated in lecture and presented in laboratory exercises and student project. P/NP or letter grading.

173. Geographic Information Systems Program- ming and Development. (4) Lecture, two hours; laboratory, two hours. Enforced requisite: course 168. Introduction to fundamental concepts and architecture of programming objects in widely used geographic information systems (GIS), and programming in GIS environment. Topics include object-oriented development using variety of programming languages. Lectures followed by laboratory exercises. P/NP or letter grading.


177. Field Methods in Physical Geography. (5) Lecture, three hours; laboratory, two hours. Laboratory open to credit to students with credit for course M127. Examination of field procedures and concepts used in observation, measurement, analysis, and interpretation of physical phenomena pertinent to natural and built environment. Topics vary from year to year and may include soils, geomorphology, and field methods in geographic information science. May be repeated for credit with topic change. P/NP or letter grading.

Regions


181. Mexico, Central America, Caribbean. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Study of geographic factors, physical and cultural, that are responsible for understanding historical development of Middle America and contemporary economic and cultural geography of Mexico and its neighbors. P/NP or letter grading.

182. Spanish South America. (4) Lecture, three hours; reading period, one hour. Designed for juniors/ seniors. Study of geographic factors, physical and cultural, that are responsible for understanding historical development of Spanish South America and contemporary economic and cultural geography of individual Spanish-speaking countries. P/NP or letter grading.
Graduate Courses

Core Courses

200A. History and Structure of Modern Geography. (4) (Formerly numbered 297A.) Lecture; three hours; reading period, one hour. Evolution of field of geography in 19th and 20th centuries, with emphasis on professionalization of geography and its emergence as modern academic discipline. S/U or letter grading.

200B. Seminar: Geographical Inquiry. (1) (Formerly numbered 298A.) Seminar, one hour. Discussion of geographical research within context of philosophical debates concerning nature of scientific inquiry. S/U grading.

Methods Courses

201. Research Design in Geography. (4) (Formerly numbered 299D.) Lecture, four hours. Introduction to logic of geographic inquiry. Topics include questions surrounding philosophy of science, research design issues, and range of methodologies available to and implemented by geographers to enable students to evaluate geographic literature critically. S/U or letter grading.

202. Qualitative Methods and Methodology. (4) (Formerly numbered 299C.) Seminar, three hours; laboratory, two hours. Examination of definition and use of qualitative methodology and methods in social-cultural geographic research. Exploration of relationship between methodology and epistemology; review of range of research methods and techniques, including interviewing and focus groups, observation, action research, ethnography, and interpretation of material culture, and consideration of ethical and practical issues of conducting qualitative research. S/U or letter grading.

204. Statistical Methods for Geographic Research. (4) (Formerly numbered 299A.) Lecture, three hours; laboratory, two hours. Requisite: course M171. Use of linear models, discriminant functions, and factor analysis to analyze problems in geography. S/U or letter grading.

M205. Spatial Statistics. (4) (Formerly numbered M272.) (Same as Statistics M222 and Urban Planning M215.) Lecture, three hours. Designed for graduate students. Survey of modern methods used in analysis of spatial data. Implementation of various techniques using real data sets from diverse fields including re- tinning, geography, geology, demography, and environmental sciences. S/U or letter grading.

M206. Introduction to Biophysical Modeling of Land Surface Processes and Land/Atmosphere Interactions. (4) (Same as Atmospheric and Oceanic Sciences M206.) Lecture, two hours; laboratory, one hour; reading period, one hour. Designed for graduate students. Presentation of introductory knowledge for graduate students to understand nature, principles, and scope of biophysical modeling of land surface processes, including ideal canopy model, radiation, heat and CO2 fluxes transfer, and satellite data application. Laboratory sessions included. S/U or letter grading.

Geospatial Information Systems

208. Geographic Data Visualization and Analysis. (4) (Formerly numbered 299B.) Lecture, three hours; laboratory, two hours. Requisites: course 168, Statistics 12. Development of broad base of knowledge and set of skills that foster conduct of high-quality geographic data analysis. S/U or letter grading.

211. Remote Sensing of Environment. (4) (Formerly numbered 299E.) Laboratory, three hours; inde- pendent study, two hours. Requisite: course 167. Study of aerial photographs and satellite images as tools for geographical research. Particular attention to analysis of landscapes and interpretation of interrelationships of individual features in their physical and cultural complex. S/U or letter grading.

Remote Sensing Courses

212. Physical, Mathematical, and Computational Basis of Remote Sensing. (4) (Formerly numbered 299F) Lecture, three hours; laboratory, two hours. Requisites: courses 169, 172. Intensive review and analysis of fundamental physics, mathematics, and computer science that are essential for modern remote sensing and application of this knowledge to modern geographical problems. May be repeated for credit with topic change. S/U or letter grading.

214. Advanced Projects in Geographic Information Systems (GIS)/Remote Sensing. (4) (Formerly numbered 268.) Lecture, one hour; laboratory, three hours. Recommended requisite: course 169 or 170 or Earth, Planetary, and Space Sciences 150. Familiarity with GIS or image processing preferred. Individualized research projects conducted on UNIX platform within structured course environment. All aspects of modeshnost original project, including data acquisition, ingestion, and analysis; interpretation of results and presentation in publication-style format. Letter grading.

215. Advanced Field and Laboratory Methods in Biophysical Geography. (4) (Formerly numbered 299G) Laboratory, five hours; reading period, one hour. Examination of advanced field and laboratory procedures used in contemporary biophysical geography research. May be repeated for credit with instructor change. S/U or letter grading.

216. Advanced Field Analysis: Biogeography. (8) (Formerly numbered 262.) Fieldwork, 10 hours. Ob- servation, measurement, and analysis of biogeographic phenomena, including identification and eval- uation of biotic populations and communities and their modifications resulting from impact of human activity. S/U or letter grading.

218. Advanced Medical Geography. (4) Lecture, two hours; discussion, one hour; reading period, one hour. Requisite: course 118. In-depth study of selected topics in medical geography and intensive re- view of recent research. S/U or letter grading.

Human Geography Courses

M224. International Migration. (4) (Formerly numbered M243.) (Same as Sociology M236B.) Lecture, three hours. Further exploration of key current theoretical debates in study of international migration, with emphasis on exploring both theoretical debates of field and empirical data and case studies on which those debates hinge, to encourage students to under- stand the development of migration in the context of world processes. S/U or letter grading.

M229A. Development Theory. (4) (Same as Urban Planning M234A.) Lecture, three hours. Review of basic literature and schools of thought on develop- ment theory through analysis of impact of mercan- tile, colonialism, capitalism, and imperialism on var- ious urban and rural social and economic structures in Third World. Presentation, through evaluation of theoretical writings and case studies, of complexity and diversity of developing countries. Emphasis on linkages between policy and rural and urban impacts. Gives students important background for courses M229B, M229C, and many other planning courses addressing Third World issues. Letter grading.

M229B. Ecological Issues in Planning. (4) (Same as Urban Planning M234B.) Lecture, three hours. Re- commended preparation: Urban Planning M265. Sci- ence and politics of modern environmental planning and planning in light of transformations inherent in global change, including how to address these questions in ways that go beyond green consumerism and bifur- cation of wild, ecological, and human environments. American environmentalism has become dominant model for many conservation practices. Informed by Muirist model of idea of untrammeled nature with people-behavior- set-aside and in combination with spiritual and scientific con- templation of nature; this approach used in environ- mental policy and as key idea in conservation and fragment biology. At opposite end is environmental planning devoted to infringing on human habitats (cities). Exploration of these competing models and many reasons to be skeptical of both in 21st century. Letter grading.

250. Advanced Topics in Urban Geography. (4) Seminar, two hours; discussion, one hour; reading period, one hour. General study of hierarchy of urban places, including discussion with emphasis on theories to account for location and size distribution of cities. S/U or letter grading.

Physical Geography Courses

255. Physical Basis of Geography. (4) (Formerly numbered 297B.) Lecture, three hours; reading period, one hour. Critical evaluation of formative influences, paradigm shifts, and present challenges of physical geography, illustrated from historical developments and changing research frontiers in geomorphology, climatology, oceanography, hydrology, and soils. S/U or letter grading.

256. Regional Terrestrial Surface Processes. (4) (Formerly numbered 207.) Seminar, three hours. Designed for graduate students. Physical concepts and basic principles of land-surface/ atmosphere interaction are discussed in terms of regional and global perspective and implications. Human activities cause changes in land cover, which in turn affect regional climate. Some regions, in particular, appear to be hot spots. Regions to be studied in detail. S/U or letter grading.

257. Land Degradation. (4) (Formerly numbered 227.) Seminar, three hours. Discussion on impact of human activities and institutions on terrestrial ecosystems and goods and services they provide. Topics vary from year to year. May be repeated for credit with topic change. S/U or letter grading.

258. Human Security and Environmental Change. (4) (Formerly numbered 218.) Seminar, three hours. Discussion of impact of environmental change on food, water, and physical security of human populations and societies’ adaptations to environmental change. Topics vary from year to year. S/U or letter grading.


265. Environmentalism. (4) (Same as Urban Planning M 265.) Lecture, three hours; discussion, one hour. Review of environmental theories and their practices in dynamic U.S. and international contexts. Issues of climate change, scenario planning, and matrix ecology and its implications in both urban and rural settings. Exploration of problematics of increasing internationalism (or international implications) of environmental practices as both of green and black economies. What does integrated environmental planning look like in this century? Letter grading.

Regional Geography Courses

290. South America. (4) (Formerly numbered 282.) Seminar, three hours; reading period, two hours. Introduction to main issues of South America, with focus mainly on cultural/historical geographical perspectives on national period; themes and periods can be adapted to individual interests. S/U or letter grading.

291. Geography of Contemporary China. (4) (Formerly numbered 286.) Seminar, three hours; reading period, two hours. Designed for graduate students. May be repeated for credit. S/U or letter grading.

292. Seminar: Urban Geography of Italy. (4) (Formerly numbered M 241.) (Same as Italian M 241.) Seminar, three hours; reading period, two hours. Themes in political geography with particular emphasis on Italy. May be repeated for credit. S/U or letter grading.

Human Geography Seminars

M230A. Theories of Regional Economic Development I. (4) (Formerly numbered M236A) (Same as Public Policy M 234 and Urban Planning M 236A.) Lecture, two hours; discussion, one hour. Introduction to theories of location of economic activity, trade, and other forms of contact between regions, process of regional growth and decline, reasons for different levels of economic development, relations between more and less developed regions. Letter grading.

M230B. Globalization and Regional Development. (4) (Formerly numbered M236B.) (Same as Urban Planning M 236B.) Lecture, three hours. Requisite: course M230A. Application of theories of regional economic development, location, and trade learned in course M230A to contemporary process known as globalization. Examination of nature and effects of globalization on development, employment, and social structure, along with implications for policy. Letter grading.

235. Seminar: Social Geography. (4) Seminar, three hours; discussion, one hour. Process of doing social/cultural geography entails conceptualizing, adapting, and reformulating social and critical theories of space, subject, and power. Examination of this process by considering theoretical themes that shape concepts of social space and social research. Theoretical discussions of recent research in social/cultural geography, particularly around topics of gender, race, sexuality, ecology, and social difference and identity. S/U or letter grading.

236. Seminar: Cultural Geography. (4) (Formerly numbered 233.) Seminar, three hours; reading period, two hours. Discussions on particular topics in cultural geography. Content may vary from year to year. May be repeated for credit. S/U or letter grading.

237. Seminar: Historical Geography. (4) Seminar, three hours; reading period, two hours. Theory and practice of historical geography in North America and Europe. May be repeated for credit. S/U or letter grading.

238. Seminar: Urban Geography. (4) (Formerly numbered 213.) Seminar, three hours; reading period, two hours. Theory and practice of historical geography in North America and Europe. May be repeated for credit. S/U or letter grading.

240. Seminar: Geographic Thought. (4) (Formerly numbered 295.) Seminar, three hours; reading period, two hours. Designed for graduate students. Discussion and study of topics significant to growth of modern philosophy of geography. S/U or letter grading.

Human Geography Advanced

245. Advanced Political Geography: Geopolitics. (4) (Formerly numbered 240.) Lecture, two hours; discussion and research period, one hour. Analysis of theories and principles of geopolitics. Selected regions used as examples of differing techniques of study in geopolitics. S/U or letter grading.

247. Advanced Topics in Cultural Geography. (4) (Formerly numbered 242.) Seminar, two hours; discussion, one hour; reading period, one hour. Requisite: course 133. Lectures and discussions around specific aspects of development of cultural landscape in different geographic environments. S/U or letter grading.

248. Advanced Topics in Economic Geography. (4) (Formerly numbered 231.) Seminar, three hours; reading period, three hours. Designed for graduate students. Advanced study of economic theories and principles S/U or letter grading.
GERMANIC LANGUAGES

College of Letters and Science
212 Royce Hall
Box 951539
Los Angeles, CA 90095-1539
310-825-3955
http://www.germanic.ucla.edu

John A. McCumber, PhD, Chair
Professors
Maria (Maite) T. de Zubiaurre, PhD
Douglas M. Kellner, PhD
Kathleen L. Komar, PhD
John A. McCumber, PhD
Todd S. Presner, PhD (Michael and Irene Ross Professor of Yiddish Studies)

Professors Emeriti
Ehrhard Bahr, PhD
Marianna D. Birnbaum, PhD
Robert S. Kirsner, PhD
James A. Schultz, PhD

Associate Professors
Christopher M. Stevens, PhD
Yasemin Yildiz, PhD

Assistant Professor
David D. Kim, PhD

Lecturers
Maria F. Brier
Miriam R. Koral
Magdalena Tarnawska Senel, PhD

Scope and Objectives
The Department of Germanic Languages offers an array of courses in languages, literatures, and cultures. The broad range of studies offers training in specialized fields such as film, linguistics, and critical theory. Courses prepare students for a variety of careers, including education, law, business, international relations, and publishing.

Undergraduate majors earn a Bachelor of Arts degree by completing one of three plans. An undergraduate minor is also available. Language, literature, and culture studies are available in Afrikaans and Dutch, in addition to German.

The graduate program offers Master of Arts and PhD degrees. Refer to the Scandinavian Section later in this catalog for information about the degrees in Scandinavian studies.

The program also provides opportunity for study, workstudy, and internships.

Undergraduate Study
The German major is a designated capstone major. During their senior year, students complete a capstone seminar under the guidance of a faculty member. In the seminar they reflect both individually and collaboratively on prior coursework for the major and draw out common themes. Students identify key ideas that interest them while demonstrating analytical thinking, synthesized knowledge, collaborative spirit, and a keen awareness of the German language and German-speaking cultures.

No credit is allowed for completing a less advanced course after successful completion of a more advanced course in Afrikaans, Dutch, German, and Yiddish grammar and/or composition.

German BA

Capstone Major

Preparation for the Major
Required: German 1, 2, 3, 4, 5, 6, or equivalent. Students who have completed one year of college-level German language courses should enroll in course 4. Students who are in doubt as to their level of language proficiency or who are native speakers should consult with the language program supervisor.

Transfer Students
Transfer applicants to the German major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of German.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major
Three plans are offered by the department:

Plan I: German Studies
Required: Six upper-division German courses, three upper-division elective courses in fields relevant to Germanic languages to be selected in consultation with the director of undergraduate studies, and German 191C. Each course must be taken for a letter grade.

Plan II: Germanic Language and Literature
Required: German 140, 141, or C142; 152; 153 or 158; 191C; and six upper-division German courses, two of which may be from outside the department with approval of the director of undergraduate studies. Each course must be taken for a letter grade.

Plan III: Germanic Linguistics
Required: German 140, 141, C142, 152, 153, 191C, one upper-division elective course in the department, and three upper-division elective courses in fields relevant to Germanic languages to be selected in consultation with the director of undergraduate studies.

Honors Program
To qualify for graduation with departmental honors, students must earn a cumulative grade-point average of 3.6 or better in upper-division German courses and a 3.3 overall GPA, and complete German 199 with a grade of A. Contact the departmental honors adviser for procedures, special arrangements, possible exceptions, and other information.

German Minor
To enter the German minor, students must have an overall grade-point average of 2.0 or better.

Required Lower-Division Courses (8 units):
German 5 and 6 or equivalent.
Required Upper-Division Courses (at least 20 units): Any five upper-division courses in the department.
A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.
Each minor course must be taken for a letter grade, and student must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of Germanic Languages offers Master of Arts (MA), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Germanic Languages and a Master of Arts (MA) degree in Scandinavian (see Scandinavian Section).

Afrikaans
Lower-Division Course
40. From Oppressed to Oppressor and Beyond: Literature in Afrikaans from Preapartheid to Postapartheid Era in English Translation. (6) Lecture, four hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H. Development of all literature in Afrikaans, with special attention to authors and poets who protested apartheid—Brink, Breytenbach, Van Heerden, Jonker, Joubert, Krige, Krog, Le Roux, Rabie, Small, and Willemse. Additional readings by Coetzee, De Lange, Krog, and others on censorship, imprisonment, South African history, and postcolonial literary theory. P/NP or letter grading.

Upper-Division Courses
105B. Intermediate Afrikaans. (4) Lecture, four hours; language laboratory. Requisite: course 105A. Grammatical exercises; reading and linguistic analysis of texts from both literary and nonliterary sources. P/NP or letter grading.
106. Intermediate Afrikaans. (4) Tutorial, three hours. Requisite: course 105B. Reading and discussion of selected masterworks in English translation, including works from early period, such as heroic and courtly epic, to authors such as Grimmeltshausen, Lessing, Schiller, and Goethe. P/NP or letter grading.

Dutch
Lower-Division Course
10. Contemporary Dutch Society and Culture: Beyond Rembrant, Cheese, and Wooden Shoes. (5) Lecture, three hours. Lectures and readings in English. Country known as Holland, or more correctly, the Netherlands (in Dutch: Nederland) has played crucial role in both American history and American current events. It was first country to set up official diplomatic relations with U.S. in 1783 and is major investor in U.S. and staunch ally of its foreign policy. Piercing of tourist aura surrounding The Netherlands by actively comparing and contrasting contemporary Dutch culture with that of contemporary American culture and society. How life would be different growing up in The Netherlands. Letter grading.

Upper-Division Courses
103A-103B. Elementary Dutch. (4-4) Lecture, four hours; language laboratory. Course 103A is requisite to 103B. Introduction to standard language of Netherlands and one of three standard languages of Belgium. Practice in grammar, listening, speaking, reading, and writing. P/NP or letter grading.
104A-104B. Accelerated Dutch. (6-6) Lecture, four hours; discussion, one hour; laboratory, two hours. Covers material in courses 103A, 103B, 103C in two terms rather than three. Letter grading.
113. Modern Dutch and Flemish Literature in Translation. (4) Lecture, three hours. Readings and analysis of works by selected authors of Netherlands and northern (Flemish) Belgium such as Boon, Claus, Couperus, Hermans, Mulisch, Multatuli, and Reve and selected poets such as Camoert, Gezele, Gorter, Kloos, Lucebert, Nijhoff, Van Ostaijen, and Vroman. Letter grading.
120. Introduction to Dutch Studies. (4) Lecture, three hours. Reading and discussion of selections from contemporary Dutch literature. Contemporary Dutch literary criticism, and modern Dutch linguistics. Emphasis of developing reading skill and on acquiring familiarity with and appreciation of scope of 20th-century Netherlandse, P/NP or letter grading.
131. Introduction to Modern Dutch Literature. (4) Discussion, three hours. Requisite: course 103B or 120. Selected works of literature of Netherlands and northern (Flemish) Belgium from mid-1850s to present, including novels by such writers as Multatuli, Couperus, Hermans, Mulisch, and Reve and poetry by such groups as Symbolist Beweging van Tachtig, Tachtig, and post-War Beweging van Vijftig. P/NP or letter grading.
199. Directed Research or Senior Project in Dutch. (4) Tutorial, three hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culuminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses
596. Directed Individual Study or Research in Afrikaans. (4) Tutorial, to be arranged with faculty member who directs study or research (course section to be identified by two-letter code using initials of sponsoring instructor—see department for ID number). May be repeated once. S/U grading.
597. Preparation for PhD Qualifying Examinations. (4) Tutorial, to be arranged with instructor (see department for ID number). S/U grading.

German
Lower-Division Courses
1. Elementary German. (4) Lecture, five hours; laboratory, one hour. P/NP or letter grading.
1G. Elementary German for Graduate Students. (4) Lecture, four hours. Preparation for Graduate Division foreign language reading requirement. May not be applied toward degree requirements. S/U grading.
2. Elementary German. (4) Lecture, five hours; laboratory, one hour. Enforced requisite: course 2. P/NP or letter grading.
2G. Elementary German for Graduate Students. (4) Lecture, four hours. Enforced requisite: course 1G. Preparation for Graduate Division foreign language reading requirement. May not be applied toward degree requirements. S/U grading.
3. Elementary German. (4) Lecture, five hours; laboratory, one hour. Enforced requisite: course 2. P/NP or letter grading.
5. Intermediate German. (4) Lecture, four hours; laboratory, one hour. Enforced requisite: course 4. P/NP or letter grading.
6. Intermediate German. (4) Lecture, four hours; laboratory, one hour. Enforced requisite: course 5. P/NP or letter grading.
8. Elementary German: Intensive. (12) Lecture, 15 hours; laboratory, five hours. Intensive basic course in German equivalent to courses 1, 2, and 3. P/NP or letter grading.
50A-50B. Great Works of German Literature in Translation. (4-5) Lecture. May not be applied toward completion of major in German. P/NP or letter grading.
50A. Medieval Period through Classicism. (4) Lecture, three hours; Study and analysis of selected masterworks in English translation, including works from earliest period, such as heroic and courtly epic, to authors such as Grimmeltshausen, Lessing, Schiller, and Goethe. P/NP or letter grading.
50B. Romanticism to Present. (5) Lecture, three hours; discussion, one hour. Study and analysis of selected masterworks in English translation, including works from early period, such as heroic and courtly epic, to authors such as Grimmeltshausen, Lessing, Schiller, and Goethe. P/NP or letter grading.
56. Figures Who Changed World: Cosmopolitanisms Within a Global Context. (5) Lecture, three hours; discussion, one hour. Introduction to strains of German philosophy and political thought that focus on cosmopolitanism. Exploration of different historical and philosophical engagements with cosmopolitan projects. P/NP or letter grading.
57. Hollywood and Germany. (5) Lecture/screenings, five hours; discussion, one hour. Examination of images of Germany generated by Hollywood, cultural/historical interface between Hollywood and Germany, and contemporary critiques of long-standing relationship between these cultural sites. Discussion of how and why cultural stereotypes are generated and maintained, and why film is a uniquely powerful tool in ideological discourse. P/NP or letter grading.
59. German Film in Cultural Context: Early German Film. (4) Lecture, two hours; discussion, one hour. Taught in German. Survey of German film between 1919 and 1945. Analysis of technological and stylistic development of film from silent Expressionist films to Nazi propaganda and entertainment films. Film discussions enhanced by interactive media. Letter grading.

60. War. (5) Lecture, three hours; discussion, two hours. Taught in English. Surveys major Central European cities and their history within the context of war, its impact on culture, and its significance from an ethical, cultural, and philosophical perspectives rather than from perspective of political and historical gains and losses. Emphasis on World War I, in which political and military confrontation seemed particularly attuned to sense of confrontationism and scandal in cultural life. Satisfies Writing II requirement. Letter grading.

61A. Modern Metropolis: Berlin. (5) Lecture, three hours; discussion, one hour. Cultural, political, architectural, and urban history of one of most vibrant and significant cities in world. Exploration of city over 2000 years, using innovative mapping tools to understand how Berlin has been a focal point for various movements and mercantile town into global city. P/NP or letter grading.

61B-61C-61D. Modern Metropolis. (5 each) Lecture, three hours; discussion, one hour. Historical exploration of major Central European cities and their cultures. P/NP or letter grading. 61B, Weimar; 61C, Vienna; 61D, Prague.

61T. Advanced German Language through Cultural History. (5) Lecture, three hours; discussion, one hour. Taught in German. Specialized language course that teaches German business vocabulary and to different types of drama and drama theory. Reading, discussion, and analysis of plays in detail, performance in roles in class, and writing of short responses. May be repeated for credit. Letter grading.

150. German Play Production Act I. (5) Lecture, four hours. Taught in English. Survey of various folklore genres in cultural history of war—on its significance from an ethical, cultural, and social variation of Germany (i.e., its historical development, dialectology, and sociolinguistic dimensions). Letter grading.

151. German Play Production Act II. (5) Lecture, four hours. Taught in English. Survey of various folklore genres in cultural history of war—on its significance from an ethical, cultural, and social variation of Germany (i.e., its historical development, dialectology, and sociolinguistic dimensions). Letter grading.

152. Conversation and Composition on Contemporary German Culture and Society I. (4) Lecture, three hours. Taught in German. Structured around themes as they emerge in contemporaneous German texts ranging from news magazine articles to literature, with emphasis on speaking and writing proficiency. Presentation software featured. P/NP or letter grading.

153. Conversation and Composition on Contemporary German Culture and Society II. (4) Lecture, three hours. Taught in German. Structured around themes as they emerge in contemporaneous German texts ranging from news magazine articles to literature, with emphasis on speaking and writing proficiency. Presentation software featured. P/NP or letter grading.

154. Business German. (4) Lecture, three hours. Taught in German. Specialized language course that teaches German business administration, practices, and correspondence, with attention to cultural nuances. Ongoing developments in administration, practices, and correspondence, with attention to cultural nuances. Ongoing developments in Internet. P/NP or letter grading.

155. Advanced German Language through Cultural History and Current Affairs. (4) Lecture, three hours. Taught in German. Advanced German course that juxtaposes cultural history with current affairs to teach complex speaking and writing skills of interpretation, analysis, and criticism. Readings may include selections from Luther, Heine, Freud, and current authors. Students create their own interactive media presentations. Letter grading.
157. Contemporary German Cinema: Advanced Conversation and Composition. (4) Lecture, three hours. Taught in German. Development of advanced speaking skills and thorough grounding in essay writing in German by considering issues of style, structure, grammar, and vocabulary. Introduction to contemporary German cinema to expose students to a slice of German (and European) culture and history, with focus on notions of boundary. Examination of different ways of borders and borders (e.g., physical borders between countries; boundaries created by various political ideologies; socially created boundaries of class, race, and gender; boundary between memory and experience) in which people are placed in them, and their reasons for these transgressions. Analysis of movies to better understand various cinematic techniques. P/N or letter grading.

158. Introduction to Study of Literature. (4) Lecture, three hours. Taught in German. Introduction to most important terms and resources of literary analysis to help students develop and improve skills in close and critical reading, literary texts, develop basic research techniques, acquire familiarity with basics of literary and cultural analysis, and find pleasure in pursuit of literary and cultural study. Letter grading.

159. German Cultural Studies. (4) Lecture, three hours. Taught in German; some theoretical readings in English. Exploration of German culture in different historical contexts. Examination of various cultural spaces, practices, and positions that engage in literary and nonliterary texts, with emphasis on constructions of sex and gender, memory and national identity, and ethnicity and race. Analysis of ways of seeing, thinking, and talking about these issues as manifested in several cultural debates that dominated public discussions in Germany (and Europe) for several weeks, months, or even years (e.g., debates about admission of women to universities at end of 19th century, reconstituting/preserving sites of memory in postwar Germany, and headscarf and integration in contemporary Germany). Letter grading.

160. Introduction to German Poetry. (4) Lecture, three hours. Taught in German. Close reading of representative examples of German lyric poetry from early as well as recent literary periods, including systematic consideration of poetic conventions and forms, fiction, imagery, symbolism, and metrics. Letter grading.

161. Introduction to German Drama. (4) Lecture, three hours. Taught in German. Analysis of selected dramatic texts (e.g., tragedy, comedy, one-act play, lyric drama, lyric theater, historical drama, etc.), including systematic review of dramatic forms, techniques, and theories. Texts selected from both contemporary and earlier periods. Letter grading.

162. Introduction to German Narrative Prose. (4) Lecture, three hours. Taught in German. Analysis of narrative prose genres (e.g., short story, novel, fairy tales, etc.), including systematic review of narrative forms, techniques, and styles. Texts selected from both contemporary and earlier periods. Letter grading.

163. Project of Enlightenment. (4) Lecture, three hours. Taught in German. Topics in Enlightenment literature, social history, and culture. Works by Goethe, Lessing, Schiller, Kant, Mozart, and others. Letter grading.


165. Introduction to Modern Literature. (4) Lecture, three hours. Taught in German. Analysis of selected modern works written between 1890 and 1945, including texts by authors such as Thomas Mann, Kafka, Brecht, and others. Letter grading.

166. Introduction to Contemporary Literature. (4) Lecture, three hours. Taught in German. Analysis and discussion of German, Austrian, Swiss, and ex-GDR literatures from 1945 to present. Examination of writers such as Heinrich Böll, Günther Grass, Friedrich Dürrenmatt, Elfriede Jelinek, and Christa Wolf with their specific political and cultural context. Letter grading.

167. Studies in German Literature before 1750. (4) Lecture, three hours. Taught in German. Readings and analysis of major works from Middle Ages to baroque. Letter grading.


170. Romanticism. (4) Lecture, three hours. Taught in German. Reading and analysis of major works by German Romantics, including Friedrich Schlegel, Novalis, E.T.A. Hoffman, and others. Letter grading.

171. Goethe’s Faust. (4) Lecture, three hours. Taught in German. Detailed interpretation of Goethe’s major work, Parts I and II, together with general consideration of other treatments of Faust theme in European literature. Letter grading.

172. Advanced Study of Modern Literature. (4) Lecture, three hours. Taught in German. Exploration of German Classicism by later authors and cultural theorists. May include problems in reception of Classicism by later authors and cultural theorists. Letter grading.

173. Advanced Study of Contemporay and Culture. (4) Lecture, three hours. Taught in German. Analysis of contemporary and cultural issues, including issues such as national borders, ethnic identity, gender relations, and commercialization of culture. Letter grading.

174. Intercultural Germany: Literature, Politics, Migration, and Culture. (4) Lecture, three hours. Taught in German. Most readings in German; some theoretical readings in English. Exploration of issues surrounding immigration and intercultural identity in Germany, Austrian, and Swiss literature after World War II. Exploration of several cultural spaces, practices, and positions that engage in literary and nonliterary texts, with emphasis on constructions of ethnicity, nation, race, and class. Analysis of several political and cultural debates that dominated media and public discussions in Germany and Europe for several weeks. Analysis of several literary texts by Turkish German and other minority/intercultural writers. Examination of hip-hop minority music and culture as voices in political debates. Exploration of contemporary controversies around Islam in Germany. Reading of several theoretical pieces that examine relationships between immigration, globalization, culture, and identity. P/N or letter grading.

175. Goethe’s Faust. (4) Lecture, three hours. Taught in German. Detailed interpretation of Goethe’s major work, Parts I and II, together with general consideration of other treatments of Faust theme in European literature. Letter grading.

176. 19th-Century Narrative Prose. (4) Lecture, three hours. Taught in German. Analysis of various political ideologies; socially created boundaries of class, race, and gender; boundary between memory and experience in which people are placed in them, and their reasons for these transgressions. Analysis of movies to better understand various cinematic techniques. P/N or letter grading.

Graduate Courses

201C. Theories of Literary Interpretation. (4) Lecture, three hours. Advanced analysis and discussion of various models of literary interpretation and schools of thought such as hermeneutics, psychoanalytic criticism, social historical approaches, semiology, structuralism, and poststructuralism. Topics vary by instructor. Letter grading.

202A. Middle High German. (4) Lecture, three hours. Introduction to Middle High German language, with particular emphasis on developing facility in reading. Study of grammar, syntax, and vocabulary combined with introduction to poetic forms and cultural context. Letter grading.

202B. Readings in Middle High German Literature. (4) Lecture, three hours. Introduction to medieval German literature and literary history and to use of contemporary theory in study of medieval texts. Continued practice in reading Middle High German, although most texts to be read in modern translation. Letter grading.

204. Early Modern German Literature. (4) Lecture, three hours. Selected readings from 1500 to 1700, with introduction to development of German as modern literary language and to literary genres and cultural models. Impact of Thirty Years’ War on German literary production and reception in German baroque. Letter grading.


207. Weimar Classicism. (4) Lecture, three hours. Reading and interpretation of major works of German Classicism. May include problems in reception of classicism by later authors and cultural theorists. Letter grading.

208. Romanticism. (4) Lecture, three hours. Analysis of selected works and theories of German Romanticism such as Friedrich Schlegel, Novalis, and Hoffman, with attention to relationship between Romanticism and other periods. Letter grading.


210A. Naturalism, Symbolism, and Expressionism. (4) Lecture, three hours. Analysis of selected works (poetry, drama, prose) of early modernism from Hauptmann to Kafka. Discussion of sociological and philosophical thought and discussion of how naturalism and symbolism and expressionism. Letter grading.

210B. 20th-Century Novel to 1945. (4) Lecture, three hours. Prose works in first half of 20th century as they express war experience, crisis of consciousness, and cultural conflicts between wars, as well as innovations in narrative technique. Letter grading.

211. Postwar Literature. (4) Lecture, three hours. Study of major works by German-speaking authors writing since World War II. Examination of issues such as identity crises, nationalism and divided Germany, gender expectations, and social-political attitudes. Letter grading.
212. Contemporary Literature and Culture. (4) Lecture, three hours. Analysis of current cultural issues and their relation to literary production and interpretation. Topics may include areas such as feminism, postcolonialism, postmodernism, and contemporary theories of literature and language.

213. Topics in Literature and Film. (4) Lecture, three hours. With focus on two different modes of cultural representation, examination of topics in German literature and film from Weimar Republic to present. Study of media theory, feminist film theory, and interrelationships between film, literature, and social history. Letter grading.

217. History of German Language. (4) Discussion, three hours. History and development of standard literary German language from time of Indo-European unity through proto-Germanic, West Germanic, medieval period, Reformation, baroque period, and Enlightenment until its final codification at end of 19th century. S/U or letter grading.


231. Gothic. (4) Discussion, three hours. Systematic study of phonology and grammar of Gothic language, with readings in Wulfila's translation of Bible and introduction to history of Goths and their place in development of medieval German. Letter grading.

232. Old High German. (4) Discussion, three hours. Introduction to earliest phases of German literature, with extensive readings in major documents of that period (750 to 1050). Emphasis on grammatical interpretation and identification of dialects used in their composition. S/U or letter grading.


251. Seminar: Germanic Linguistics. (4) Seminar, three hours. Current topics in synchronic or diachronic linguistics, such as specific issues in generative grammar, sociolinguistics and dialectology, or language acquisition. Letter grading.

252. Seminar: Historical and Comparative Germanic Linguistics. (4) Seminar, three hours. Topics selected from field of historical German phonology and syntax according to needs and preparation of students enrolled (e.g., West Germanic problem and classification of Germanic languages, development of Germanic verbal and nominal morphology, proto-Germanic syntax). S/U or letter grading.


256. Seminar: Enlightenment. (4) Seminar, three hours. Selected topics in literature and culture between 1715 and 1832. Special emphasis on work of Goethe and Schiller as it relates to philosophic texts such as Hegel's Phänomenologie des Geistes or as it relates to historical events such as French and American revolutions. Letter grading.


261. Seminar: Contemporary Literature. (4) Seminar, three hours. In-depth analysis of one particular issue in post-1945 German literature and culture. Letter grading.

263. Seminar: Literary Theory. (4) Seminar, three hours. Special focus on particular theoretical school or interpretive paradigm. Content varies with instructor. Letter grading.


265. German Philosophy. (4) Seminar, three hours. Taught in English. Examination of work of Hannah Arendt in political theory with emphasis on connection between forms of government and precarious lives of others—Jews, the stateless, pariahs. Evaluation within comparative and transnational context of political action, public sphere, amor mundi, moral judgment, individual or collective responsibility, violence, and literature. Letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Approaches to Foreign Language Pedagogy. (4) Seminar, one hour; discussion, two hours. Issues include development of current theories of second-language acquisition, effects of these theories on language teaching methods, and linguistic analysis of foreign-language pedagogy, and design of syllabi for foreign-language courses. S/U grading.

566. Directed Individual Study or Research. (4) Tutorial, three hours. To be arranged with faculty member who directs study or research. Required research paper must be filed with department chair. S/U grading.

597. Preparation for MA Comprehensive Examination and for PhD Qualifying Examinations. (4) Tutorial, three hours. To be arranged with faculty member who directs examination. S/U grading.


599. Research for and Preparation of PhD Dissertation. (4 to 12) Tutorial, three hours. To be arranged with faculty member who directs study. May be repeated. S/U grading.

Yiddish

Lower-Division Course

10. From Old World to New: Becoming Modern as Reflected in Yiddish Cinema and Literature. (5) Lecture, three hours; discussion, one hour. Use of Yiddish cinema (classic films and documentaries) as primary focal points to examine ways in which one heritage culture, that of Ashkenazic Jews, adapted to forces of modernity (urbanization, immigration, radical social movements, assimilation, and destructive organized anti-Semitism) from late-19th century to present. Exploration of transformational themes in depth through viewing of selected films, readings, and research and weekly papers, and in-class discussions, P/NP or letter grading.

Upper-Division Courses

101A. Elementary Yiddish. (4) Lecture, four hours. Introduction to grammar, instruction in listening, speaking, reading, and writing skills. P/NP or letter grading.


121A. 20th-Century Yiddish Poetry in English Translation. (4) Lecture, three hours. Taught in English. Examination of work of Hannah Arendt in political theory with emphasis on connection between forms of government and precarious lives of others—Jews, the stateless, pariahs. Evaluation within comparative and transnational context of political action, public sphere, amor mundi, moral judgment, individual or collective responsibility, violence, and literature. Letter grading.


131B. Modern Yiddish Prose and Drama. (4) Lecture, three hours. Taught in English. Examination of work of Hannah Arendt in political theory with emphasis on connection between forms of government and precarious lives of others—Jews, the stateless, pariahs. Evaluation within comparative and transnational context of political action, public sphere, amor mundi, moral judgment, individual or collective responsibility, violence, and literature. Letter grading.

131C. Special Topics in Yiddish Literature. (4) Lecture, three hours. Taught in English. Examination of work of Hannah Arendt in political theory with emphasis on connection between forms of government and precarious lives of others—Jews, the stateless, pariahs. Evaluation within comparative and transnational context of political action, public sphere, amor mundi, moral judgment, individual or collective responsibility, violence, and literature. Letter grading.

Graduate Courses

506. Directed Individual Study or Research in Yiddish. (4) Tutorial, to be arranged with faculty member who directs study or research (course section to be identified by two-letter code using initials of sponsoring instructor—see department for ID number). May be repeated once. S/U grading.
Interdisciplinary Minor Meyer and Renee Luskin School of Public Affairs

3375H Public Affairs Building
Box 95166
Los Angeles, CA 90095-1656
310-206-8966
paul@luskin.ucla.edu
http://luskin.ucla.edu/admissions/inside-luskin/#gerontology

David B. Reuben, MD, Chair

Faculty Committee
Janet C. Frank, DrPH (Community Health Sciences)
Michael R. Irwin, MD, in Residence (Psychiatry and Biobehavioral Sciences, Psychology)
Lené F. Levy-Storms, PhD, MPH (Social Welfare)
David B. Reuben, MD (Medicine)
Theodore F. Robles, PhD (Psychology)
Gary W. Small, MD (Psychiatry and Biobehavioral Sciences)
Fernando M. Torres-Gil, PhD (Public Policy, Social Welfare)
Steven P. Wallace, PhD (Community Health Sciences)

Scope and Objectives
The worldwide expansion of the older adult population ensures that issues regarding aging will dominate our environmental, economic, social, political, psychological, and medical concerns and endeavors well into the twenty-first century. The undergraduate minor in Gerontology (1) provides students with a foundation understanding of the current state of science related to human aging, (2) enables students to assess longevity's potential contribution and challenge to contemporary society, and (3) provides students with an appreciation of opportunities to contribute, personally and professionally, to a diverse aging society.

Undergraduate Study

Gerontology Minor

To enter the Gerontology minor, students must have an overall grade-point average of 2.0 or better and a grade of B or better in Gerontology M108.

Required Upper-Division Courses (28 to 32 units): Gerontology M108, four courses from M104C, M104D, M119O, M119X, M142SL, M150, M165, Psychology 124C, 150, and two courses from Gerontology 185, 198A, 198B.

Students who have completed Clusters 80A with a grade of B or better may petition to have the course applied toward the gerontology core course requirement. Students who have completed Clusters 80CW may petition to have the course applied toward one of the elective requirements.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Gerontology

Upper-Division Courses

M104C. Diversity in Aging: Roles of Gender and Ethnicity. (4) (Same as Chicana and Chicano Studies M106B, Gender Studies M104C, and Social Welfare M104C.) Lecture, four hours. Exploration of complexity of variables related to diversity of aging population and variability in aging process. Examination of gender and ethnicity within context of both physical and social aging, in multidisciplinary perspective utilizing faculty from variety of fields to address issues of diversity. Letter grading.

M104D. Public Policy and Aging. (4) (Same as Social Welfare M104D) Lecture, four hours. Examination of theoretical models and concepts of policy-making, with application to policy. Analysis of decision-making processes that affect aging policy. Description of history of contemporary aging policy. Exploration of current policy issues affecting elderly. P/NP or letter grading.

M104E. Social Aspects of Aging. (4) (Same as Social Welfare M104E.) Lecture, four hours. Topics include theories of aging, economic factors, changing roles, social relationships, and special populations. Weekly seminar organized around key aspect of social gerontology. P/NP or letter grading.

M108. Biomedical, Social, and Policy Frontiers in Human Aging. (5) (Same as Social Welfare M108.) Lecture, four hours. Limited to juniors/seniors. Course of human aging charted in ways that are based on variety of recent research frontiers. Use of conceptual frameworks to increase relevance of aging to students' lives and enhance their critical thinking—biopsychosocial approach that is based on recognition that aging is inherently interdisciplinary phenomenon, and life course perspective that is distinguished by analytical framework it provides for understanding interplay between human lives and changing social structures, and allows students to understand how events, successes, and losses at one stage of life can have important effects later in life. Focus on individuals as they age within one particular sociohistorical context. Letter grading.

M119O. Psychology of Aging. (4) (Same as Psychology M119O.) Lecture, four hours. Requisite: Psychology 115. Designed for juniors/seniors. Aging refers to developmental changes occurring at end stages of life. Some alterations that occur represent improvement, others are detrimental. Examination of impact of aging process on mental phenomena and exploration of ways in which positive changes can be maximally utilized and impact of detrimental alterations minimized. P/NP or letter grading.

M119X. Biology and Behavioral Neuroscience of Aging. (4) (Same as Psychology M119X.) Lecture, three hours. Designed for juniors/seniors. Biologic mechanisms of aging process and its terminal phase, death, have been increasingly studied in recent years. Establishment of what is known experimentally about biology and behavioral neuroscience of aging and evaluation of theories developed to account for this knowledge. P/NP or letter grading.

120. Sex and Gender. Lecture, three hours. Sexuality in aging from psychological, psychobiological, physical, and psychosocial perspectives, with emphasis on differences between females and males concerning physical and social changes that occur with aging and how this impacts on emotional well-being and human sexual response. P/NP or letter grading.

M142SL. Intergenerational Communication across Lifespan. (4) (Same as Social Welfare M142SL.) Lecture, three hours; fieldwork, one hour. Limited to juniors/seniors. What do you say to your parents in conversation? How do you talk to your grandparents? Does your family talk well to one another as group? How do you communicate well with boss who is 30 years older than you? Individuals of all ages interact with one another, and their interactions have significant throughout their lives. Introduction to psychological, interpersonal, and societal issues related to intergenerational communication across lifespan. Letter grading.

M150. Sociology of Aging. (4) (Same as Sociology M150.) Lecture, three hours; discussion, one hour. Study of sociological processes shaping definition, experience, and response to aging in contemporary society. Topics include race, class, and gender in aging over life course; interpersonal relations and social worlds of aged; caregiving relations and institutions; professions concerned with aged and aging. Letter grading.

M150SL. Disability Policy and Services in Contemporary America. (4) (Same as Disability Studies M130 and Social Welfare M165.) Lecture, three hours. Limited to juniors/seniors. Growing numbers of people with all ages with disabilities are leading active and productive lives in American communities. Many others are struggling to lead such lives. Who are people with disabilities in contemporary America? How has U.S. responded over time to various needs and aspirations of people with disabilities, young and old? What demands have been made over time by disability advocates? How has government addressed demands of advocates for various disability populations? What do we know about extent to which public policies and programs are responsive to people in need? How do demographics, economics, and politics continue to influence evolving public policy responses? P/NP or letter grading.

195CE. Community or Corporate Internships in Gerontology. (4) Tutorial, one hour; internship (approved community setting), eight hours. Requisites: course M108, or Clusters 80A and 80B. Limited to juniors/seniors. Internship in applications of gerontology in supervised setting in community agency or business coordinated by Center for Community Learning. Students meet on regular basis with internship coordinator and must submit weekly writing assignments and final paper at end of term. Eight units of 195CE (or 199) are required for successful completion of Gerontology minor. Individual contract with supervising placement sponsor required. Information and contracts may be obtained from Gerontology Advising Office, 310-206-8966, paul@spa.ucla.edu. Letter grading.

199. Directed Research or Senior Project in Gerontology. (4) Tutorial, to be arranged. Requisites: course M105, or Clusters 80A and 80B. Limited to juniors/seniors. Supervised individual research under guidance of gerontology faculty mentor. Submission of weekly writing assignments and research paper at end of term. Eight units of 199 (or 195CE) required for successful completion of minor. Individual contract required. Information and contracts may be obtained from Gerontology Advising Office, Letter grading.

GLOBAL HEALTH

Interdisciplinary Minor College of Letters and Science

10373 Bunche Hall
Box 951487
Los Angeles, CA 90095-1487
310-206-6571
undergrad@international.ucla.edu
http://web.international.ucla.edu/institute/academics/globalhealth/

Michael A. Rodriguez, MD, MPH, Chair
Faculty Committee
David H. Gere, PhD (World Arts and Cultures/Dance)
Ippolito A. Kalofonos, MD, PhD (Psychiatry and Biobehavioral Sciences)
Michael F. Lofchie, PhD (Political Science)
Ninez A. Ponce, MPP, PhD (Health Policy and Management)
Michael A. Rodriguez, MD, MPH (Family Medicine)

Scope and Objectives
The Global Health minor allows students to develop an interdisciplinary understanding of health issues in a global context. Students take courses that provide opportunity to become familiar with approaches to global health from the perspective of the social sciences, arts, and humanities, as well as the physical and biobehavioral sciences. The minor is appropriate for students from all majors.

Undergraduate Study
Global Health Minor
To be admitted to the minor, students must be in good academic standing (overall grade-point average of 2.0 or better) and have completed all lower-division minor courses with a GPA of 2.0 or better in those courses. After satisfying these requirements, students may declare the minor in consultation with the academic counselor.

Required Lower-Division Courses (10 units):
Two courses from Civil and Environmental Engineering 58SL, Clusters 80A, 80B, 80CW, Community Health Sciences 91, Global Studies 1, History 3D, Honors Collegium 1, 14, 26, International and Area Studies 1, Molecular, Cell, and Developmental Biology 60, 70, Nursing 50, Statistics 13, World Arts and Cultures 2, 33.

Required Upper-Division Courses (20 to 25 units):
Global Health 100 and four courses from the following theme areas, with a maximum of two courses from any single area:

- Art: World Arts and Cultures 144, C158, C159, 160.
- Biological Sciences: Psychology 179B.
- Community Health: Community Health Sciences 100, 161, CM170, 187A, 187B, 195, Health Policy and Management 140, Medicine M160A, M160B, Nursing 152W, Psychiatry and Biobehavioral Sciences 175, Psychology 150.
- Environmental Health: Environment 166, M167, Environmental Health Sciences 100, C185A, C185B.
- Genetics: Honors Collegium 141, Society and Genetics 162, 163.
- Health Humanities and Communication: English Composition 131C, History 179A, 179B.


A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Global Health
Upper-Division Courses
100. Global Health and Development. (4) (Formerly International Development Studies 140.) Lecture, three hours; discussion, one hour (when scheduled). Interdisciplinary examination of key issues in area of global health, with focus on developing world. Provides basis for understanding current debates that frame global health problems and actions in and across nations with strikingly different political-economic contexts. Discussion of how local and international communities attempt to address challenges of global health problems and how interventions play out through range of policy and programmatic approaches. P/NP or letter grading.
110A-110B. Field Studies in Global Health. (4-4) Seminar, three hours. Enforced corequisite for course 110A: course 110B. Exploration of issues regarding global health in important locations around world. Hands-on experiential courses offered for students participating in UCLA Travel Study Program. Field trips included to gain firsthand experience. May be repeated with topic and/or location change. Offered in summer only. P/NP or letter grading.
150. Migration and Health. (4) Lecture, three hours; discussion, one hour. Introduction to history, current status, and future of migration and health using social determinants of health model to foster multidisciplinary analysis of status of migrant health around world. Exploration of social determinants of health affecting migrating populations, including gender, race, ethnicity, socioeconomic status, poverty, religion, politics, governance, and environment. Letter grading.

Global Studies
Interdepartmental Program
College of Letters and Science
10359 Bunche Hall
Box 951487
Los Angeles, CA 90095-1487
310-825-5187
idps@international.ucla.edu
http://web.international.ucla.edu/institute/academics/globalstudies/

Michael F. Thies, PhD, Chair
Faculty Committee
John A. Agnew, PhD (Geography; Italian)
Elizabeth M. Deloughrey, PhD (English)
David D. Kim, PhD (Germanic Languages)
Purnima Manekar, PhD (Asian American Studies; Film, Television, and Digital Media; Gender Studies)
Saloni Mathur, PhD (Art History)
Margaret E. Peters, PhD (Political Science)
Shaina S. Potts, PhD (Geography)
Kau Raulstila, JD, PhD (Law)
David L. Rigby, PhD (Geography; Statistics)
Michael F. Thies, PhD (Political Science)
Dominic R. Thomas, PhD (French; Comparative Literature, French and Francophone Studies)
Yunxiang Yan, PhD (Anthropology)

Scope and Objectives
The Global Studies Interdepartmental Program provides undergraduate students with a rigorous interdisciplinary education in the processes of globalization and their consequences. Housed in the UCLA International Institute, Global Studies offers a research-oriented undergraduate major leading to a Bachelor of Arts degree, as well as an undergraduate minor. The curriculum features three thematic pillars that capture the principal dimensions of the unprecedented depth and breadth of interconnections among nation-states, ethnic and religious groups, and individuals. Culture and society courses concentrate on the tensions between local ways of life with deep historical, linguistic, ethnic, and religious roots and today’s pressures for transnational cultures and multiple identities, fueled by the communication of ideas and the movement of people all around the world. Governance and conflict courses focus on challenges to the nation-state from forms of governance above (regional and global forms of governance) and below (autonomy and secessionist movements) and from security threats beyond interstate warfare (ethnic conflict, terrorism, civil wars). Markets and Resources courses address the interactions among global, regional, national, and subnational economic processes over resources and market dynamics, their effects on different societies with respect to economic growth, poverty, inequality, the environment, and the interactions among market forces, political institutions, and public policy.

The curriculum draws on insights from disciplines across the humanities and social sciences to give students the theoretical and methodological skills and knowledge base necessary to understand this complex and rapidly changing world.
Undergraduate Study
The Global Studies major is a designated capstone major. As students progress through the major, they move from a set of broad themes, theories, and perspectives to a more specialized focus about which they develop a specific research expertise and write a thesis. In completing the capstone, students should demonstrate appropriate mastery of a specialized area of global studies and a critical understanding of current scholarly concerns, literatures, and debates. They should also be able to identify and analyze primary sources and use those sources and appropriate scholarly literature to design and carry out a research project.

Global Studies BA
Capstone Major
Admission
Admission to the Global Studies major is by application only and is highly competitive, with only a limited number of students admitted each year. To be eligible to apply, UCLA students must have completed all nonlanguage preparation for the major courses and one modern foreign language equivalent to level 3 by the end of the term in which they are applying. Any remaining language courses may be completed after students have been accepted to the major. Each preparation for the major course must be taken for a letter grade, and the UC grade-point average for all preparation courses must be a minimum of 3.25. In addition, students must have earned a grade of B or better in Global Studies 1.

The application period is once per year, and students must apply no later than the end of fall quarter of their junior year.

Meeting the above minimums does not guarantee admission to the program. Admission is on a competitive basis, using the above qualifications as minimum standards for consideration.

Global Studies Premajor
Incoming freshman and transfer students may be admitted as Global Studies premajors on acceptance to UCLA. Premajor students must apply for the major at the end of fall quarter of their junior year; they are not automatically accepted into the major.

Preparation for the Major
Required: Global Studies 1 with a grade of B or better; one methods course selected from Political Science 6, 6R, 30, Statistics 10, 12, or 13; demonstrated proficiency equivalent to level 6 at UCLA in one modern foreign language; and five additional courses as follows:

1. one culture and society course selected from Anthropology 3, 4, Comparative Literature 1C or 2CW, 1D or 2DW, 4CW or 4DW, Ethnomusicology 25, Gender Studies 10, Geography 3, 6, History 2B, World Arts and Cultures 20, or 33, (2) one government and conflict course selected from History 10B, 22, Political Science 10, 20, 50, 50R, or Sociology 1, and (3) one markets and resources course selected from Economics 1, 2, Environment 12, Clusters M1A, or Sociology 51. The remaining two courses, taken from two separate categories, may be selected from the three lists above.

One course from the following list may be applied toward the culture and society category: Asian 70C, Asian American Studies 10, Chicana and Chicano Studies 10B, French 14, 14W, History 8A, 9E, International and Area Studies 31, 33, 50, Italian 42A, 42B, 46, Middle Eastern Studies 50C, Russian 90A, 90B, 90BW, Spanish 42, or 44. A minimum grade-point average of 3.25 is required in these courses.

Transfer Students
Transfer applicants to the Global Studies pre-major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one modern world history course, one major world region languages and cultures course, one international politics course, one macroeconomics or microeconomics course, one statistics course, and demonstrated proficiency equivalent to level 3 at UCLA in one modern foreign language. Transfer students must apply for the major by the end of fall quarter of their junior year.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

After successful completion of Global Studies 100A and 100B, students are expected to attend a summer Global Learning Institute at one of several locations in the world in which they enroll in Global Studies 110A and 110B.

During their senior year, students must also take four capstone courses—Global Studies 191 and 194 in fall quarter, followed by 199A and 199B. Courses 199A and 199B culminate in a capstone senior thesis of 50 to 50 pages.

Honors Program
To qualify for departmental honors, students must (1) have a grade-point average of 3.5 or better in upper-division courses in the major, (2) have a cumulative GPA of 3.25 or better, and (3) complete Global Studies 199B with a grade of A– or better. Honors or higher honors may be granted at the discretion of the faculty sponsor and the faculty committee to students demonstrating exceptional ability on the senior thesis.

Global Studies Minor
The Global Studies minor offers students a multidisciplinary curriculum in the humanities and social sciences through which they can explore the complex and multifaceted interconnections that characterize the contemporary world. The minor is designed to complement and enrich studies in their major.

To enter the minor, students must (1) be in good academic standing (minimum 2.0 grade-point average) and (2) have completed Global Studies 1 and one course in two of the following three categories: (a) culture and society—Anthropology 3, 4, Asian American Studies 10, Chicana and Chicano Studies 10B, Comparative Literature 1C or 2CW, 1D or 2DW, 4CW or 4DW, Ethnomusicology 25, French 14, 14W, Gender Studies 10, Geography 3, 6, History 2B, 8A, International and Area Studies 31, Italian 42A, 42B, Middle Eastern Studies 50C, Russian 90B, 90BW, Spanish 42, 44, World Arts and Cultures 20, or 33; (b) governance and conflict—History 10B, 22, Political Science 10, 20, 50, 50R, or Sociology 1, and (c) markets and resources—Economics 1, 2, Environment 12, Clusters M1A, or Sociology 51.


After completing Global Studies 100A and 100B, Global Studies minors are highly encouraged to participate in a summer Global Learning Institute at one of several locations.
around the world. The courses offered, Global Studies 110A and 110B, may be applied toward any two of the elective categories (culture and society, governance and conflict, and markets).

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Global Studies

Lower-Division Courses

1. Globalization: Markets. (5) Lecture, three hours; discussion, one hour. Exploration of world economy. Topics include trade, colonialism, Industrial Revolution, and ever-increasing integration of local and national markets into truly global economy. P/NP or letter grading.

10. International Diplomacy and Foreign Affairs. (2) Lecture, two hours. Corequisite: course 1. Investigation of globalization of governance and its effect on world affairs, sovereignty, and international system of nation-states. Topics may also include roles of international institutions and emergence of new global actors, as well as development of global norms concerning such issues as human rights, gender equality, and human security. Letter grading.

100A. Globalization: Governance and Conflict. (5) Lecture, three hours; discussion, one hour. Enforced requisite: course 1. Exploration of globalization of governance and its effect on world affairs, sovereignty, and international system of nation-states. Topics may also include roles of international institutions and emergence of new global actors, as well as development of global norms concerning such issues as human rights, gender equality, and human security. Letter grading.

110A. Globalization in Context. (5) Lecture, six hours. Corequisite: course 100B. Corequisite: course 110B. Culture, economy, history, and politics of different locations around world and how they are affected by globalization. Field trips included to gain first-hand experience of these processes. Offered in summer only. P/NP or letter grading.


160. Selected Topics in Global Studies. (4) Lecture, three hours; discussion, one hour (when scheduled). Examination of one or more topics related to global studies. May be repeated for credit with topic change. P/NP or letter grading.

188A-188B. Special Studies in Global Studies. (4) Seminar-organized experience or participation in special projects in global studies. May be repeated for credit. P/NP or letter grading.


192. Undergraduate Practicum in Global Studies. (2) Seminar, two hours; practicum, to be arranged. Limited to juniors/seniors. Training and supervised practicum for advanced undergraduate students to serve as undergraduate course assistants in global studies courses. Students assist in preparation and presentation of materials and development of innovative programs with guidance of faculty members. May not be applied toward major requirements. May be repeated for credit. P/NP grading.


199, Directed Research in Global Studies. (4) Tutorial, to be arranged. Limited to seniors. Supervised individual research under guidance of faculty mentor. Culminating paper required. May be applied toward requirements via petition. May be repeated for credit. Individual contract required. Letter grading.


Graduate Course

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprenticeship personnel employment as teaching assistant, teaching assistant, and fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

395CE. Supervised Preparation for Community-Engaged Teaching. (4) Seminar, two hours. Suitable for graduate students in any discipline. Introduction to best practices for experiential learning and academic civic engagement, with emphasis on critical service learning pedagogy and strategies for collaborating effectively with diverse communities of Los Angeles. Facilitated by Center for Community Learning. S/U grading.

HEAD AND NECK SURGERY

David Geffen School of Medicine

62-132 Center for Health Sciences
Box 951624
Los Angeles, CA 90095-1624
310-825-5179
https://www.uclahealth.org/head-neck-surgery/academic-programs

Gerald S. Berke, MD (Victor Goodhill, MD, Professor of Head and Neck Surgery), Chair

Scope and Objectives

The Department of Head and Neck Surgery academic programs consist of a nationally recognized residency program, medical school education, prestigious fellowships, and ongoing continuing medical education. A critical success factor in these academic efforts is the high level of clinical expertise demonstrated by all faculty members. Additionally, department faculty members have an active commitment to basic science and clinical research as an integral component of the program of instruction. These tenets not only ensure quality at every educational level, but also provide a superior milieu for the development of teacher-investigators.

The residency program is incorporated into the department patient care and research activities in six affiliated medical centers and exposes residents to all of the subspecialties during the course of their training. Medical student teaching is a combined effort by faculty members, fellows, and residents and consists of lectures, didactic learning, and hands-on experience in clinical and research settings. The department offers one- and two-year fellowships.

For more details on the Department of Head and Neck Surgery and a listing of the courses offered, see the department website.

Graduate Professional Student Development

Graduate Course

495CE. Supervised Preparation for Community-Engaged Teaching. (4) Seminar, two hours. Suitable for graduate students in any discipline. Introduction to best practices for experiential learning and academic civic engagement, with emphasis on critical service learning pedagogy and strategies for collaborating effectively with diverse communities of Los Angeles. Facilitated by Center for Community Learning. S/U grading.

HEALTH POLICY AND MANAGEMENT

Jonathan and Karin Fielding School of Public Health

31-269 Center for Health Sciences
Box 951772
Los Angeles, CA 90095-1772
310-825-2594
http://hpmd.ucla.edu
http://hpmih.ucla.edu

Graduate Professional Student Development

Graduate Course

495CE. Supervised Preparation for Community-Engaged Teaching. (4) Seminar, two hours. Suitable for graduate students in any discipline. Introduction to best practices for experiential learning and academic civic engagement, with emphasis on critical service learning pedagogy and strategies for collaborating effectively with diverse communities of Los Angeles. Facilitated by Center for Community Learning. S/U grading.

Health Policy and Management

Jonathan and Karin Fielding School of Public Health

31-269 Center for Health Sciences
Box 951772
Los Angeles, CA 90095-1772
310-825-2594
http://hpmd.ucla.edu
http://hpmih.ucla.edu

Jack Needleman, PhD, Chair

Thomas H. Rice, PhD, Vice Chair

Professors

Kathryn A. Atchison, DDS, MPH
Roshan Bastani, PhD
Robert H. Brook, MD, ScD
Scope and Objectives

The field of health policy and management examines the organization and financing of various activities to prevent and treat disease. This includes programs in both the public and private sectors at all levels—local, state, and federal. Faculty members come from such diverse fields as economics, management, law, statistics, operations research, planning, medicine, history, sociology, and political science. These diverse backgrounds are harmonized by their devotion to the analysis of problems in the financing and delivery of health policy and management, with focus on populations rather than individual patients.

The Department of Health Policy and Management offers both practice-oriented and research-oriented graduate programs. The primary professional degree, the Master of Public Health (MPH), includes training in various aspects of health administration such as policy formulation, health planning, organization, and management. For information on the MPH and concurrent degree programs, see Public Health Schoolwide Programs. Admission to the DrPH program has been suspended.

For those interested in careers in research and teaching, the department offers MS and PhD degrees in Health Policy and Management. These programs maintain close ties with relevant activities in the Schools of Dentistry and Medicine, including the Robert Wood Johnson Clinical Scholars Program, the Program in Prevention, and the Cancer Control Division. The RAND/UCLA Center for Health Policy Study and the RAND/UCLA Center for Healthcare Financing Research afford opportunities for joint activities with the RAND Health Sciences Program. Graduates of the academic degree programs pursue careers in universities, as well as in public and private agencies involved in health services research and health policy analysis.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Health Policy and Management offers Master of Science (MS), Doctor of Philosophy (PhD), and Executive MPH (EMPH) degrees in Health Policy and Management.

Health Policy and Management

Upper-Division Courses

100. Introduction to Health Policy and Management. (4) Lecture; four hours; discussion, one hour. Preparation: 4 units of social sciences. Structure and function of American healthcare system; issues and forces shaping its future. P/NP or letter grading.


C121. Tobacco: Prevention, Use, and Public Policy. (4) Seminar, four hours. Introduction to field of maternal and child health, with focus on major issues affecting health and well-being of children and families over life course. Emphasis on health, prevention, and supportive programs at different stages of child's life; application of life course health development framework to understand health disparities and implications for policy and practice. Letter grading.

M168. Healthcare for American Indians. (4) (Same as American Indian Studies CM168.) Lecture, two hours; discussion, one hour. Identification of traditional health beliefs, health practices, and healthcare systems of American Indian tribes to understand role of U.S. government in healthcare services for Indian people. Description of health problems that have affected American Indian people and definition of contemporary health issues and measures taken to raise health status of American Indian people. Letter grading.

197. Individual Studies in Health Services. (2 to 4) Tutorial, four hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200A-200B. Health Systems Organization and Financing. (4-4) Lecture, three hours; discussion, one hour. Limited to graduate health services students. In-depth analysis of health services systems in U.S., using relevant theories, concepts, and models. S/U or letter grading.

M202. Qualitative Research Design and Methodology for Indigenous Communities. (8) (Same as American Indian Studies M202 and Nursing M221.) Seminar, three hours. Introduction to some key theoretical themes in American Indian studies and exploration of methods that can be used to incorporate them in research on American Indian cultures, societies, languages, and other issues. Quantitative methods (design, appropriate use), with emphasis on qualitative research methods, ethics, and special considerations in conducting research in American Indian country. Design of research and exploration of feasibility of researching topics. Letter grading.

203A. Applied Microeconomics. (4) Lecture, four hours. Requisite: Mathematics 3A or 3B or 31A. Course 203A is requisite to 203B. Basic concepts of microeconomics, with emphasis on their application to actual situations and their use in program solving and focus on theory of choice. Extensive use of differential calculus. Letter grading.
203B. Applied Microeconomics. (4) Lecture, four hours. Requisites: course 203A and one course from Mathematics 3A, 3B, or 31A. Basic concepts of microeconomics, with emphasis on their application to actual situations and their use in problem solving and focus on the theory of firms and markets. Extensive use of differential calculus. Letter grading.

M204A-M204B-M204C. Seminars: Pharmaceutical Economics and Policy. (1–1–2) (Same as Economics 204A-M204B-M204C.) Seminar, two hours every other week. Requisite: course M236. Limited to graduate public health and economics students. Various topics in economics of pharmaceutical industry, marketing of pharmaceuticals, drug regulation, and economic impact of pharmaceuticals. In Progress (M204A-M204B) and letter (M204C) grading.

205. Pharmaceutical Policy. (4) Lecture, three hours. Policy issues pertaining to pharmaceutical sector. Topics include determinants of expenditures on drugs, price setting in industry, health insurance coverage for pharmaceuticals, and research and development process. Letter grading.

206. Healthcare for Vulnerable Populations. (4) Lecture, three hours. Overview of health services issues associated with organization, financing, and delivery of healthcare services to vulnerable populations within domestic and international contexts, with emphasis on understanding of social, political, economic, and cultural issues that lead to disparities in access, quality, and cost of healthcare services that lead to vulnerability for particular populations. Introduction to social policy issues that have been adopted to address these health disparities. Analysis and development of policy and management options that serve needs of vulnerable populations within healthcare system. Letter grading.

207. Current Topics in Health Services: Practice and Policy Perspectives. (2) Seminar, two hours. Required of Dr.P.H. students. Examination and discussion of various topics in health services practice sectors, with focus on organizational leadership and direction in addressing these issues. Journal club discussions of relevant scientific literature, presentation of dissertation work by advanced Dr.P.H. students, and interactive lectures/discussions by professionals in public health practice and healthcare management. S/U or letter grading.


215A. Healthcare Quality and Performance Management. (4) Lecture, four hours. Preparation: completion of summer internship requirement. Management and operations of individual units and organizations of American healthcare system. Exploration of ways in which healthcare actually functions and how to ensure their quality and effectiveness. Examination of roles, activities, and daily challenges of managers and how these challenges can best be met on day-to-day basis. Emphasis on applied practice with intent being improvement of student managerial competencies and on development of skills to manage operational processes in delivery of health services, primarily directed to students in MS and PhD programs. Letter grading.

215B. Applied Methods for Improvement/Implementation Science. (4) Lecture, four hours. Enforced requisite: course 215A. Planning and management of improvement programs in current work of students and future roles as change agents and leaders of healthcare systems. Training in skills and analytic methods for applying improvement science in clinical settings and health systems. Completion of improvement projects that demonstrate student competence in improvement science. Emphasis on case studies and applications so students gain skills in improvement project design and implementation. Analyses of cases, individual improvement projects, and class discussions to allow students to apply this knowledge to organizational examples. Letter grading.


217. Evidence-Based Medicine and Organizational Change. (4) Lecture, three hours. Requisites: courses 200A, 200B, M422. Designed for graduate students in public health or other health sciences disciplines. Participation in student presentation and discussion of selected papers dealing with course topics, including clinical trials, meta-analysis, small and large area variations in care, and development and implementation of clinical guidelines. Emphasis on implications for health policy. Letter grading.

221. Tobacco: Prevention, Use, and Public Policy. (4) (Formerly numbered CM221.) Lecture, four hours. Designed for juniors/seniors and graduate students. Study of tobacco use and use control. High emphasis on understanding tobacco consumption patterns, addiction, and nicotine dependence, with interplay of historical, biological, sociocultural, political, and economic forces with knowledge, attitudes, and behavior choices of individuals. Introduction to tobacco use and control (including prevention, cessation, and treatment) of tobacco-related diseases and conditions. Lecture grading.

225A-225B. Health Services Research Design. (6-8) Lecture, four hours; laboratory, two hours. Limited to departmental MS and PhD students. Letter grading. 225A. Introduction to scope of health services research, research methods, and design of health services research, choice and assessment of measures for such research, and methods for studies involving direct data collection. Broad overview to conceptualizing various types of research paradigms, building conceptual models of what students are trying to study, designing and testing measures, and direct data collection issues of survey and questionnaire design, sampling, community engagement, and research ethics. 225B. Requisite: course 225A. Development of conceptual models for health services research, identification and use of secondary data sources, study design, and its operationalization through regression models.

225C. Research Methods for Improvement/Implemen- tation Science. (4) Lecture, four hours. Enforced requisite: course 215A or 215B. Design and implementation of improvement projects, including improvement initiatives and pragmatic clinical trials. Provides skills in research methods for improvement and implementation studies in clinical settings (including community-based settings) and health systems. Completion of improvement research projects that demonstrate student competence in design and implementation. Fundamentals in research design and methods for conducting rigorous inferential evaluation in real world of implementation science, with emphasis on methods for generalizing results of improvement and implementation studies involving dynamic testing. Emphasis on use of case studies and applications so students gain skills in design and implementation. Letter grading.

226A-226B. Readings in Health Services Research. (4) Lecture, four hours; seminar, two hours. Preparation: completion of summer internship requirement. Review and discussion of current issues, methods, and development of conceptual models, classic empirical studies, and current research illustrating cutting-edge approaches to conceptualization, modeling, design, literature review, sampling, data collection, and research. Development of health services research proposal. Letter grading.

226C. Microeconomic Theory of Health Sector. (4) (Same as Public Policy M226.) Lecture, four hours; seminar, two hours. Preparation: intermediate microeconomics. Requisite: Biostatistics 100A. Microeconomic aspects of healthcare system, including health manpower substitution, choice of efficient modes of treatment, market efficiency, and competition. Letter grading.

227A. Special Topics in Health Services: Current Research Issues. (2 to 4) Seminar, two hours. Design and presentation of papers on topics of interest in health services journals. Letter grading.

227B. Special Topics in Health Services: Seminar Series. (2 to 4) Seminar, two hours. Designed for doctoral students. Presentation of proposed or ongoing research projects by faculty members and students, with discussion to determine relevant methodological and policy issues, as well as to offer constructive criticism. May be repeated for credit with topic change. Letter grading.


231. History of Public Health. (4) Discussion, three hours. Designed for doctoral students. Emphasis on topics which illuminate current issues in public health policy. Discussion of historical perspectives on healthcare providers, healthcare institutions, health care reform movements, public health activities, childprotection, and AIDS. S/U or letter grading.

232. Leadership Capstone Seminar. (4) Seminar, four hours. Preparation: completion of summer internship requirement. Designed for graduate students completing their master’s training in health management and health policy. Examination of leaders and leadership in healthcare and other organizations to provide preparation for introduction to organizational behaviors, and characteristics of organizational leaders. Relationship and importance of vision, values, change, strategy, and communication. Identification of characteristics of successful leaders. Students evaluate their own leadership style and identify opportunities to further develop their leadership abilities. Letter grading.


237C. issues in Health Services Methodologies. (9) Lecture, four hours; discussion, two hours. Requi- sites: courses 237A, 237B, Biostatistics 200A, 200B (or 201). Designed for doctoral students. Intended to train students in statistical and economic methods used in health services research, with focus on prac- tical application of advanced regression models. Letter grading.

239A. Special Topics in Health Services: Introduc- tion to Decision Analysis and Cost-Effectiveness Analysis. (2 to 4) Lecture, two hours. Requisite: courses 200A and 200B, or M233. Techniques to assess broad spectrum of medical technologies: therapeutic and diagnostic tests and procedures, clinical practice patterns, public health interventions, and pharma- ceuticals. Demonstration of how decision analysis pro- vides basic framework for conducting various eco- nomic evaluations. May be repeated for credit with topic change. Letter grading.

239B. Special Topics in Health Services: Advanced Topics in Decision Analysis and Cost-Effective- ness Analysis. (4) Lecture, four hours. Requisite: course 239A. How to conduct uncertainty-annotated methods used to construct quality-ad- justed life years (QALYs), conduct Markov analyses, critically analyze large-scale published cost-effectiveness analyses. Lectures and discussions to explore how each method presents strengths and limitations of published CEAs to peers, and use advanced features of TreeAge software to construct and analyze CEA models, including Markov models. May be repeated for credit with topic change. Letter grading.


241. Economics of Health Policy. (4) Lecture, four hours. Requisite: course M236 or doctoral standing. Second-level health economics course, with em- phasis on health policy applications, designed to pro- vide more nuanced view of health economics than does course M236. Provides more training for master's students interested in policy, as well as ma- terial and insights for doctoral students who may find it useful in thinking about dissertation topics. Em- phasis on the specific applications of health econo- mics and how these characteristics can result in market failure and various policy tools that can be used to deal with these failures. Because U.S. is only developing and usually it is different than other nations, private insurance, course goes into more detail on that topic. Alternative conceptual models to traditional market one, discussion of proposed U.S. reforms, and examination of systems in selected other coun- tries. Letter grading.

M242. Determinants of Health. (4) (Same as Com- munity Health Sciences M232.) Lecture, three hours; discussion, one hour. Designed for graduate students. Critical thinking for what determines health and evidence for social, economic, environmental, genetic, health system, and other factors that influ- ence health of populations and defined subgroups. Letter grading.


249A-249Z. Special Topics in Health Services. (2 to 4 each) Lecture, four hours. Requisites: courses 200A and 200B, or M236. Special topics in health policy, health financing, and organiza- tion and administration of health services. Sections offered on regular basis, with topics announced in preceding term. May be repeated for credit with topic change:

M249E. Advanced Topics in Health Economics. (4) (Same as Public Policy M266.) Seminar, four hours. Requisites: courses 200A, 200B, M236. Advanced treatment of empirical methods and empirical research issues in the economics of health services, including mental health economics, pharmaceutical economics, and relationship between labor supply, welfare, and health. Letter grading.

M249Q. Essentials of Health Administration. (2) (Same as Psychiatry M210.) Seminar, two hours. Designed for postdoctoral fellows and advanced PhD students. Participation in peer review process for academic journal clinical health psychology; outside study, nine hours. Examination of systems in selected other coun- tries. Presentation of student research in progress as well as solicitation of feedback from class regarding grant proposals, manuscript submissions, and future directions for research. Possible reviews of assigned articles, with focus on particular topics in cancer pre- vention and control. Letter grading.

249R. Cancer Prevention and Control Research. (2) Seminar, two hours. Limited to graduate students. Presentations by faculty members and outside speakers, as well as students, on research topics in cancer prevention and control as well as career develop- ment issues such as grant writing, scientific review process, research funding, and other academic is- sues. Presentation of student research in progress as well as solicitation of feedback from class regarding grant proposals, manuscript submissions, and future directions for research. Possible reviews of assigned articles, with focus on particular topics in cancer pre- vention and control. Letter grading.

249S. Introduction to Implementation Science. (4) Seminar, four hours. Requisites: courses 200A, 200B. Recommended preparation: understanding of social science research methods. Designed to provide basic understanding of implementation evidence- based approaches in real-world practice settings. In- cludes exposure to terminology, conceptual frame- works, research designs, and methods and their ap- propriate applications across various practice set- tings and populations. Interactive class discussion and guest lectures by experts in implementation sci- ence. S/U or letter grading.

251. Quality Improvement and Informatics. (4) Lec- ture, four hours. Requisites: course 100, Biostatistics 100A. Introduction to concepts of healthcare quality measurement, process improvement, and information systems, as well as organizational aspects of imple- menting them. Letter grading.

M252. Medicare Reform. (4) (Same as Public Policy M267.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Analytical and managerial skills learned earlier to be used to analyze problems with existing Medicare program and to de- velop specific options for reforming features of pro- gram to accommodate coming pressures generated by retirement of baby-boom generation. Letter grading.

M255. Obesity, Physical Activity, and Nutrition Seminar. (4) (Same as Community Health Sciences M253.) Seminar, three hours; outside study, one hour. Designed for graduate students. Multidisciplinary in- troduction at graduate level to epidemiology, physi- ology, and current state of preventive and therapeutic interventions for overweight and obesity. Includes exam- ination of health policy approaches to healthy nutrition and physical activity promotion. S/U or letter grading.

260. World Health. (2) (Formerly numbered 260B.) Lecture, two hours. Designed for graduate students. Overview of world health, with emphasis on health-care outside U.S. Key areas include burden of infec- tious diseases, health economics, and impact of healthcare policy on healthcare delivery. Letter grading.

265. Challenges in Clinical Health Services Re- search. (4) Lecture, four hours. Requisites: courses 200A and 200B, or Community Health Sciences 210. Examination of health policy and political processes, including effects of political structure and institutions; economic and social factors; interest groups, classes, and social movements; media and public opinion, and other fac- tors. Letter grading.

266A-266B. Community-Based Participatory Health Research: Methods and Applications. (4-4) Lecture, one hour, discussion, one hour; fieldwork, two hours. Corequisite: course 200A and 200B, or Community Health Sciences 210. Examination of health policy and political processes, including effects of political structure and institutions; economic and social factors; interest groups, classes, and social movements; media and public opinion, and other fac- tors. Letter grading.

M269. Healthcare Policy and Finance. (4) (Same as Public Policy M274.) Lecture, four hours; discussion, one hour. Limited to graduate students. Overview of physical and mental health behaviors and status of major racial/ethnic groups in U.S. Where appropriate, discussion of international issues as well. S/U or letter grading.


M285. Ethical Theory and Applications in Public Health. (4) (Same as Community Health Sciences M248.) Lecture, four hours; discussion, one hour. Limited to graduate students.Overview of ethical issues and principles in health policy and healthcare management. Research, writing, and dis- cussion on variety of issues in health, and human rights to enhance professionalism, leadership, and systems thinking and improve student sensitivity to needs of patients, coworkers, and fiduciary share- holders. How ethics are foundation of leadership. Letter grading.

286. American Political Institutions and Health Pol- icy. (4) Lecture, three hours; discussion, one hour. To effectively participate in policy process as analyst, policymaker, advocate, or citizen, it is necessary to understand institutional and political context within which policy is made. Introduction to federal and state policy-making, with focus on health policy. Dis- cussion of topics in federal level in context of ex- amination of stakeholders, public, interest groups, and na- ture of issue space for health policy. Structure and process of public institutions at federal level, Cort- gress, President, executive agencies, courts, and ad- ministrative law. State responsibilities and federal/ state relations. How analysis enters policy process with examination of roles of federal analytic agencies, private research and advocacy groups. Letter grading.

M287. Politics of Health Policy. (4) (Same as Community Health Sciences M269.) Lecture, four hours; discussion, one hour. Requisites: courses 200A and 200B. Introduction to ethical theories and crit- ical ethical issues pertaining to healthcare policy and healthcare management. Research, writing, and dis- cussion of variety of issues in health, and human rights to enhance professionalism, leadership, and systems thinking and improve student sensitivity to needs of patients, coworkers, and fiduciary share- holders. How ethics are foundation of leadership. Letter grading.

Health Policy and Management / 399
288. Role and Impact of Technology on Health Services. (4) Lecture, four hours. Examination of role and impact of technology on health services in the U.S. from point of view of system itself. Exploration of various types of technologies for their policy, economic, and organizational impact. Letter grading.

289. Healthcare Disparities. (4) Seminar, three hours. Limited to graduate students. Exploration of what constitutes and explains disparity in healthcare. Emphasis on understanding history of disparities in U.S. to understand current state of disparities, and on evaluating effectiveness of ongoing strategies to eliminate them, such as increasing insurance coverage and delivery of efficient healthcare. Discussion of explanation of disparities. Examination of sociological models that explain disparities in healthcare and evaluation and expansion on these models. Letter grading.

M290. Evolving Paradigms of Prevention: Interventions in Early Childhood. (4) (Same as Community Health Sciences M237.) Seminar, three hours; fieldwork, one hour. Designed for graduate students. Introduction to use of early childhood interventions as means of preventing adverse health and developmental outcomes. Concepts of developmental vulnerability, approaches to assessment, models of service delivery, evaluation and cost-benefit issues, funding, and other topics of current interest. Letter grading.

375. Teaching Apprentice Practicum. (1-4) Seminar, one hour. Preparation: apprentice personnel employed as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of faculty. Member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.


401. Public Health Informatics. (4) Lecture, three hours. Preparation: general familiarity and understanding of basic information technologies. Recommended requisite: course 251. Introduction to field of public health informatics and examination of impact of information technology practice of public health. Entire process, from systems conceptualization and design to project planning and development to system implementation and use. Letter grading.


M411. Issues in Cancer Prevention and Control. (4) (Same as Community Health Sciences M411.) Lecture, four hours. Designed for juniors/seniors and graduate students. Introduction to causes and characteristics of cancer epidemic, cancer control goals for nation, and interventions designed to encourage smoking cessation/prevention, cancer screening, and other dietary, psychosocial, and lifestyle changes. Letter grading.

415. Organizational Analysis. (4) Seminar, four hours. Introduction to important questions and perspectives relevant to understanding organizational behavior and change in healthcare and public health environments. Active paradigms in organizational theory, particularly perspectives important for understanding delivery system change. Examination of empirical research to clarify how important organizational constructs have been operationalized and to highlight methodological challenges of studying organizations in healthcare/public health. Letter grading.

M420. Children with Special Healthcare Needs: Systems Perspective. (4) (Same as Community Health Sciences M420 and Social Welfare M290L.) Lecture, three hours; one hour, Examination and evaluation of principles, policies, programs, and practices that have evolved to identify, assess, and meet special needs of infants, children, and adolescents with developmental disabilities or chronic illness and their families. Letter grading.


423. Advanced Evaluation Theory and Methods for Health Services. (4) Lecture, four hours. Designed for departmental MS and PhD students. Familiarity with current theoretical concepts in evaluation to gain skills in integrating program implementation and evaluation design. Development of student ability to apply various evaluation methodologies most appropriate to variety of settings both within and outside health care and public health, and consideration of advantages and disadvantages of potential design. Examination of shift in field of evaluation over past decade from principal focus on program efficacy (i.e., internal validity) to more balanced approach considering efficacy in content of feasibility, reach, cost, and sustainability (i.e., external validity) and evaluation designs that have emerged (e.g., pragmatic and adaptive approaches).


428. Child and Family Health Program Community Leadership Seminar. (2) (Same as Community Health Sciences M428.) Seminar, two hours. Designed for graduate students. Examination of characteristics of community-based organizations (CBOs) and role of leadership in decision-making processes in health care. Focus on child health in Los Angeles County. Letter grading.

M429. Building Advocacy Skills: Reproductive Health Focus. (4) (Same as Community Health Sciences M429.) Seminar, three hours. Required prerequisite: one prior health policy course such as Community Health Sciences 247 or Health Policy 235. Designed for School of Public Health graduate and doctoral students. Skills-building course to develop competence in assessing, developing, and implementing advocacy strategies for reproductive health initiatives. Introduction to legislative and community advocacy interventions and to policy processes, including policy analysis and development of resources necessary for legislative advocacy. Identification of advocacy goals and objectives, development of advocacy plan, coalition building, organizational capacity building, media relations, and message development for various audiences. Students learn about range of former and current reproductive health advocacy campaigns. Letter grading.


438. Issues and Problems of Local Health Administration. (4) Lecture, three hours. Preparation: one health services course. Requisites: course 100, Epidemiology 100. Overview of issues currently faced by local health departments, including providing public health programs during fiscal constraint, quality improvement, interagency relationships and partnerships, and political and public interactions. Letter grading.

439. Dental Care Administration. (4) Lecture, four hours. Preparation: one health services course. Requisites: community health sciences 247 or health policy 235. Examination of leadership competencies that are or should be employed by organizations effective in shaping maternal and child health programs and policies (or any population-level policies and programs). Leaders from CBOs in Los Angeles meet with students, comment on their practicum experiences, and underscore community leadership concepts demonstrated by those CBOs. S/U or letter grading.

430. Organizational Behavior and Human Resources in Healthcare Organizations. (4) Lecture, four hours. Managerial skills and behaviors applied to components of organizations at several levels: individual, interpersonal, group, intergroup, and system. Core human resource management. Unique features of healthcare services organizations stressed as applications are presented. Letter grading.


434. Building Advocacy Skills: Reproductive Health Focus. (4) (Same as Community Health Sciences M434.) Seminar, three hours. Required prerequisite: one prior health policy course such as Community Health Sciences 247 or Health Policy 235. Designed for School of Public Health graduate and doctoral students. Skills-building course to develop competence in assessing, developing, and implementing advocacy strategies for reproductive health initiatives. Introduction to legislative and community advocacy interventions and to policy processes, including policy analysis and development of resources necessary for legislative advocacy. Identification of advocacy goals and objectives, development of advocacy plan, coalition building, organizational capacity building, media relations, and message development for various audiences. Students learn about range of former and current reproductive health advocacy campaigns. Letter grading.
and social media text, cloud networking for wireless
cess, natural language processing of medical record
houses, hands-on data manipulation in Excel and Ac-
analytic techniques for each data source, including
tient-provider-portal metadata. Review of associated
Food processing, as well as data delivery from patients to
hours. Use of technology for data collection and pro-

M.P. and MS minimum total course requirement;
be arranged. Only 4 units may be applied toward
minimum total course requirement; may not be applied
cooperative arrangements with USC. No more than 8

M449A-M449B. Child Health, Programs, and Poli-
cy. (4-4) (Same as Community Health Sciences
Lecture, four hours. Requisite: course 200A, 200B. Ex-
amination of key elements in annual
marketing process and of consumer, competitor,
comparative analysis, market segmentation, and
target markets. Letter grading.

500. Cooperative Program. (2 to 8) Tutorial, to be
arranged: Preparation: consent of UCLA graduate ad-
viser and graduate dean, and host campus instructor,
department chair, and graduate dean. Used to record
enrollment of UCLA students in courses taken under
cooperative arrangements with USCI. No more than 8
units may be applied toward master’s degree min-
imum total course requirement; may not be applied

501. Directed Individual Study or Research. (2 to 8)
Tutorial, to be arranged. Limited to graduate students.
May not be applied toward any degree course re-
quirements. May be repeated for credit. S/U grading.

598. Master’s Thesis Research. (2 to 8) Tutorial,
to be arranged. Only 4 units may be applied toward
M.P.H., and MS minimum total course required;
may not be applied toward minimum graduate course
requirement. May be repeated for credit. S/U grading.

599. Doctoral Dissertation Research. (2 to 12) Tu-
torial, to be arranged. May not be applied toward any
degree course requirements. May be repeated for
credit. S/U grading.

HISTORY
College of Letters and Science
6265 Bunche Hall
Box 951473
Los Angeles, CA 90095-1473
310-825-4601
http://www.history.ucla.edu

Stephen A. Aron, PhD, Chair

Professors
Francis R. Anderson, BA
Andrew Apter, PhD
Stephan A. Aron, PhD
Eric R. Avila, PhD
Peter Baldwin, PhD
Stephan A. Bell, PhD
Joel T. Bruslow, MD, PhD, in Residence
Soraya de Chadarevian, PhD
Ellen C. Dubois, PhD
John Duncan, PhD
Caroline C. Ford, PhD
James L. Gelvin, PhD
Nile S. Green, PhD
Margaret C. Jacob, PhD
Russell Jacoby, PhD, in Residence
Robin D.G. Kelley, PhD (Gary B. Nash Endowed
Professor of U.S. History)
Vinay Lai, PhD
Valerie J. Matsumoto, PhD
Michael Meranze, PhD
Michael G. Morony, PhD
David N. Myers, PhD (Robert N. Burt Endowed
History Department Professor, Sady and Ludwig
Kahn Professor of Jewish History)
Anthony R. Padgen, PhD
Carla Gardina Pestana, PhD (Joyce Oldham Appleby
Endowed Professor of America in the World)
David D. Phillips, PhD
Gabriel Piterberg, DPhil
Theodore M. Porter, PhD (Peter Reill Professor of
European History)
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Geoffrey Robinson, PhD
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Professor of Medieval History)
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German History)
Debora L. Silverman, PhD (Presidential Professor of
Modern European History)
Sarah Abrevaya Stein, PhD (Maurice Amado
Professor of Sephardic Studies)
Brenda Stevenson, PhD (Nickoll Family Endowed
Professor of History)
Sanjay Subrahmanyam, PhD (Irving and Jean Stone
Professor)
William R. Summershill, PhD (Dr. E. Bradford Burns
Professor of Latin American Studies)
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Joan Waugh, PhD
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Emeritus)
Frank O. Gallego, PhD (Emeritus)
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Carlo Ginzburg, Laurea in lettere (Franklin D. Murphy
Professor Emeritus of Italian Renaissance Studies)
Juan Gómez-Ullateones, PhD
Robert A. Hill, MSc
Thomas S. Hines, PhD
Richard G. Hovannisian, PhD (Armenian Educational
Foundation Professor Emeritus of Modern Armenian
History)
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Modern European History)
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Matthew Norton Wise, PhD
Robert Wohl, PhD
Stanley A. Wolpert, PhD

Associate Professors
Sembou David Alarian, PhD (Richard Hovannisian
Professor of Modern Armenian History)
Scott D. Brown, PhD
Robin L.H. Derby, PhD
Stephen P. Frank, PhD
Jessica L. Goldberg, PhD
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Frank Tobias Higbie, PhD
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Ghislaine E. Lydon, PhD
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Michael Salman, PhD
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Sharon J. Traweek, PhD
Albion M. Urdank, PhD
Craig B. Yirush, PhD

Assistant Professors
Peter J. Hudson, PhD
Minayo A. Nasiali, PhD
Fernando Perez-Montesinos, PhD

Senior Lecturer SOE
S. Scott Bartch, PhD, Emeritus

Senior Lecturer
Mary F. Corey, PhD

Lecturer
John S. Langdon, PhD

Adjunct Associate Professor
Amir Alexander, PhD
Scope and Objectives

History is the study of the past of our own society and how it emerged out of the traditions that produced it. At the same time, self-knowledge for students of history comes not only from self-discovery, but from a comparison of their own tradition and experience with those of others. It is only by studying the history of other civilizations and cultures that we can hope to gain perspective on our own.

The course offerings in the Department of History at UCLA are designed to bring about an understanding of the forces that have shaped the many cultures of this country and the world. UCLA has one of the largest, most distinguished, and most diverse history faculties in the country. Its main emphasis is on the many aspects of social history, but intellectual, cultural, and political history are also strongly represented.

Of all undergraduate majors, History is probably the most flexible and far-reaching. Leading to a Bachelor of Arts degree, it is excellent preparation for a wide variety of careers—law, teaching, business, the communications media, public services, and medicine.

The graduate program leads to the PhD degree in History (a master's degree may be earned in the process of completing PhD requirements). Traditionally, the MA and PhD in History have led to careers in high school, college, and university teaching. Increasingly, they are also being put to use in government service, international business, museum and archival work, and journalism.

Undergraduate Study

The History major is a designated capstone major. Undergraduate students take a capstone seminar in which they demonstrate mastery of a specialized area of history and a critical understanding of current scholarly concerns, literature, and debate, then design and complete a research project using those primary sources and literature.

History BA

Capstone Major

The History Department undergraduate program consists of 16 courses in history (six lower-division—the Preparation for the Major, including the premajor requirements; 10 upper-division—the Major). Each course must be taken for a letter grade.

Preparation for the Premajor and Major

Required for the Premajor: Three courses, including two in Western civilization (History 1A, 1B, 1C) or two in world history (courses 20, 21, 22), and one course from 96W or 97A through 97O.

After completing the three courses with a minimum grade-point average of 2.0, students should petition to enter the major at the undergraduate counselor's office in 6248 Bunche Hall.

Required for the Major: Three additional lower-division history courses.

Transfer Students

Transfer applicants to the History major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one semester or two quarters of history of Western civilization or world history, one historical practice course, and three additional lower-division history courses.

Transfer credit for the premajor courses is subject to department approval. Transfer students should consult with the undergraduate counselor before enrolling in any courses for the major.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: At least 10 upper-division history courses, including (1) two courses in U.S. history, (2) two courses in non-Western history from the same area (i.e., Latin America, Asia, Near East, Africa), (3) two courses in European history or in history of science, and (4) one capstone seminar from the History 191 series.

The requirements for U.S., non-Western, and European history may be fulfilled with either upper or lower-division courses, but majors are required to take a minimum of 10 upper-division history courses.

There is no language requirement for the major; however, students wishing to enter the honors program or planning to do graduate work in history are urged to pursue language study early in their undergraduate careers.

Advanced Placement Credit in History

Effective fall quarter 2002 for entering freshmen, no course credit is granted for any AP examination.

Honors Program

The honors program is designed for History majors who are interested in completing a year-long research project that culminates in an honors thesis. A 3.5 departmental grade-point average is required for admission. To graduate with departmental honors, students must have a cumulative or overall GPA of at least 3.0 in all University-level coursework and at least a 3.5 GPA in all coursework required for the major.

The honors thesis must be completed in three terms, on the basis of work carried out in History 185A, 185B, and 185C. Students must register their intention to undertake an honors thesis with the undergraduate affairs vice chair no later than spring quarter of their junior year.

When students register for honors, they must provide the undergraduate affairs vice chair with a two-paragraph description of their thesis project, which must be approved in writing by the faculty member who agrees to act as their adviser. The undergraduate affairs vice chair must also approve the proposed project in writing.

The faculty adviser is primarily responsible for guiding the thesis work to its completion and assigns grades for the honors courses after the thesis is complete. The honors thesis should be 40 to 60 pages in length and be based on primary source material. Determination of the level of honors awarded (no honors, honors, or highest honors) is made by the undergraduate affairs vice chair, acting in conjunction with the honors committee, at the end of the term in which the thesis is completed.

History Minor

The History minor introduces students to historical processes and institutions.

To enter the minor, students must have an overall grade-point average of 2.0 or better and file a petition in the Undergraduate office, 6284 Bunche Hall.

Required Lower-Division Courses (10 units): Any two lower-division history courses.

Required Upper-Division Courses (20 units): Any five upper-division history courses. At least one of the five courses must be taken in residence at UCLA.

A maximum of 4 units of special studies courses (199) approved by the adviser and a maximum of 4 units of capstone seminars (191) may be applied toward the minor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

History of Science and Medicine Minor

The History of Science and Medicine minor is designed for students who wish to augment their major, perhaps in one of the sciences, with a series of courses that analyze the historical growth, impact, and significance of science and medicine in Western and world culture. The minor consists of a choice of lower-division courses that expose students to overviews of science and medicine in large time periods or to specific thematic concerns. Upper-division courses offer more focused and often smaller classes that explore crucial episodes or areas with a more rigorous and sophisticated content and methodology.

To enter the minor, students must be in good academic standing (2.0 grade-point average), have completed 45 units and at least one lower-division course in the history of science or medicine for a letter grade, and file a petition with the minor adviser in 6265 Bunche Hall.

Required Lower-Division Courses (12 units): Three courses from History 2B, 2A through 3D, Philosophy 8.

Required Upper-Division Courses (20 units): Five courses from Anthropology 100, History 179A through 180C, any upper-division Honors Collegium courses with history of science or history of medicine content, Philosophy 124.
Each year certain undergraduate seminars in the History 191 sequence are designated as applicable to the upper-division minor requirements. Students may also petition to have other relevant courses, including those from other departments, applied toward the upper-division requirements.

At least one upper-division course, to be selected and approved in consultation with the undergraduate or faculty advisor, must be writing a research or interpretative paper of 20 or more pages. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of History offers Master of Arts (MA), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in History.

History

Lower-Division Courses

1A. Introduction to Western Civilization: Ancient Civilizations, Prehistory to circa A.D. 843. (5) Lecture, three hours; discussion, one hour. Introduction to the West and its connections to rest of world from 843 to 1715. Profound social, political, cultural, and intellectual changes that affected development of modern world. Topics covered include economic, social, and cultural aspects of feudal system; relationship between Church and empire; new religious movements (including the Reformation); formation of nation-states; relationship between Western Europe and non-Western regions. P/NP or letter grading.

1B. Introduction to Western Civilization: Circa 843 to circa 1715. (5) Lecture, three hours; discussion, one hour. Introduction to history of the West and its connections to rest of world after 1715, during period of sweeping political, social, and cultural changes and transformations. Topics covered include industrialization, rise of nationalism and mass politics, revolutionary movements, urbanization, mass global migration, European expansion and imperialism, and decolonization, leading to emergence of new nation states in Europe's former colonies. P/NP or letter grading.

1CH. Introduction to Western Civilization: Circa A.D. 843 to circa 1715 (Honors). (5) Lecture, three hours; discussion, two hours. Honors sequence parallel to course 1A. P/NP or letter grading.

1DH. Introduction to Western Civilization: Circa A.D. 843 to circa 1715 (Honors). (5) Lecture, three hours; discussion, two hours. Honors sequence parallel to course 1B. P/NP or letter grading.

2B. Social Knowledge and Social Power. (5) Lecture, three hours; discussion, two hours. History of social knowledge and social power in the 19th and 20th centuries. Everyday ideas and practices about human nature, common sense, and community and relation of those practices to social thought, social engineering, and social science. Themes include development of industrial societies through public activities and discourses; how social knowledge differs in agricultural, mercantile, industrial, and information-based political economies; and how social science addresses these issues. P/NP or letter grading.

2C. Religion, Occult, and Science: Mystics, Heretics, and Witches in Western Tradition, 1000 to 1600. (5) Lecture, three hours; discussion, two hours. Specific aspects of elite and popular culture in medieval and early modern Europe. Manner in which men and women sought to explain, order, and escape terror of their lives by embracing transcendental religious experiences, dreaming of apocalypse and witchcraft. Examination of experiences in context of the state, birth of a new science, and economic and social change. P/NP or letter grading.

3A-3B-3C. History of Science. (5-5-5) Lecture, three hours; discussion, two hours. History majors may not apply these courses on science general education requirements. P/NP or letter grading.

3A. Renaissance to 1800. (5) Lecture, three hours; discussion, two hours. Survey of beginnings of physical sciences involving transformation from Aristotelian to Newtonian cosmology, mechanization of natural world, rise of experimental science, and origin of scientific societies. P/NP or letter grading.

3B. Enlightenment to 1800. (5) Lecture, three hours; discussion, two hours. In this period science became part of Enlightenment campaign for reason and of culture of an Industrial Revolution. New social science and evolution of science and religion demonstrate its rising intellectual and practical significance. P/NP or letter grading.

3C. 20th Century. (5) Lecture, three hours; discussion, two hours. Ranging from starting new physics of relativity and the quantum, and of nuclear weapons, to molecular reductionism in biology and campaigns for statistical objectivity, examination of involvement of science in technological, military, intellectual, and political changes of the 20th century. P/NP or letter grading.

3D. History of Modern Medicine. (5) Lecture, three hours; discussion, two hours. Examination, through illustrated lectures and focused discussion of primary sources, of five important themes in development of modern medicine: nature of diagnosis, emergence of surgery, epidemics, conception and treatment of insanity, and use of medical technology. P/NP or letter grading.

4. Introduction to History of Religions. (5) Same as Religion 4.) Lecture, three hours; discussion, two hours. Comparative study of eight major religious traditions, focusing on offerings and subsequent decisive changes in their respective historical developments and interactions. Equips students with intellectual tools necessary for thinking analytically, ethically, and empathetically about fascinating human phenomena identified as religious, such as sacred acts, places, words, and persons in their varied historical contexts. Development of student skills in critical thinking, analyzing documents, and making persuasive arguments based on historical evidence. P/NP or letter grading.

5. Holocaust: History and Memory. (5) Lecture, three hours; discussion, two hours. Holocaust, murder of six million Jews by Germans, causal events of World War II, is one of crucial events of modern history. Exploration of origins of Holocaust, perpetrators and victims, and changing efforts to come to terms with this genocide. Exploration of forces that led to Holocaust, including emergence of scientific racism, anti-Semitism, and machinery of scientific anti-Semitism. Consideration about implications of genocide, including significance of gender and sexuality, relationship between war and genocide, meanings of resistance and culpability, and political implications of Holocaust. Exploration of how genocide of European Jewry was intertwined with targeting of other victims of Nazi rule, including Roma, Slavs, black Germans, disabled, homosexuals, and political opponents of National Socialism. P/NP or letter grading.

8A. Colonial Latin America. (5) Lecture, three hours; discussion, two hours. General introduction to Latin American history from contact period to independence (1500s to 1820s). Social and economic development of Native American, European, and African cultures in Latin America; issues of ethnicity and gender; development of colonial institutions and societies; and emergence of local and national identities. Readings focus on writings of Latin American men and women from the period studied. P/NP or letter grading.

8AH. Colonial Latin America (Honors). (5) Lecture, three hours; discussion, two hours. Honors course parallel to course 8A. P/NP or letter grading.

8B. Modern Latin America. (5) Lecture, three hours; discussion, one hour. Introductory survey of social, political, and economic history of Latin America after independence, region that includes Mexico, Central and South America, and Caribbean. Formation of independent nation states and political regimes and quest for sovereignty and its challenges in shadow of U.S., approached from bottom up through lens of social history, everyday life, and popular culture. P/NP or letter grading.

8BH. Modern Latin America (Honors). (5) Lecture, three hours; discussion, one hour. Honors course parallel to course 8B. P/NP or letter grading.

8C. Latin American Social History. (5) Lecture, three hours; discussion, two hours. Historical and contemporary perspective of role of ordinary people in Latin American society. Each lecture/film session centers on a major Latin American movie illustrative of a theme in social history. P/NP or letter grading.

8CH. Latin American Social History (Honors). (5) Lecture, three hours; discussion, two hours. Honors course parallel to course 8C. P/NP or letter grading.

9A-9E. Introduction to Asian Civilizations. (5 each) Lecture, three hours; discussion, two hours. Honors course parallel to course 9C. P/NP or letter grading.

9A. History of India. (5) Lecture, three hours; discussion, two hours. Historical and contemporary perspective of role of ordinary people in Indian society. Each lecture/film session centers on a major film about India. P/NP or letter grading.

9C. History of Japan. (5) Lecture, three hours; discussion, two hours. Survey of Japanese history from earliest recorded time to the present, with emphasis on development of Japan as a cultural daughter of China. Attention to manner in which Chinese culture was adopted and assimilated which became unique. Creation of the modern state in the last century and impact of Western civilization on Japanese culture. P/NP or letter grading.

9D. History of Middle East. (5) Lecture, three hours; discussion, two hours. Introduction to history of Islamic world from advent of Islam to present day. P/NP or letter grading.
9E. Southeast Asian Crossroads. (6) Lecture, three hours; discussion, two hours. Overview history of a region uniting by its wet tropical environment and divided by great religious, cultural, and political pluralism, with focus on Vietnamese, Thai, Filipino, Khmer, Burmese, and Malay-Ioanoese patterns. P/NP or letter grading.

M10A-10B. History of Africa. (5-5) P/NP or letter grading. M10A. To 1800. (Same as African American Studies M10A.) Lecture, three hours; discussion, one hour. Exploration of development of African societies from earliest times to late 18th century. 10B. 1800 to Present. Lecture, three hours; discussion, two hours. Not open to credit to students with credit for course 10BH or 10BW. Survey of social, economic, and political developments in Africa since 1800, with focus on slave trade, imperialism and colonialism, and nationalism and independence. Culminating project may be required. P/NP or letter grading. 10BH. Introduction to Civilizations of Africa (Honors). (4) Lecture, three hours; discussion, two hours. Not open to credit to students with credit for course 10B or 10BW. Honors course parallel to course 10B. P/NP or letter grading. 10BW. Introduction to Civilizations of Africa since 1800. (6) Lecture, three hours; discussion, two hours. Enforced requisite: the maximum of 3 units of English as a Second Language 36. Not open for credit to students with credit for course 10B or 10BH. Survey of social, economic, and political developments in Africa since 1800, with focus on slave trade, imperialism and colonialism, and nationalism and independence. Attention to different ideologies (nationalism, socialism, apartheid), rural/urban tensions, changing role of women.

12A. Inequality: History of Mass Imprisonment. (5) Lecture, three hours; discussion, one hour. P/NP or letter grading. 12A. To 1820: History of China—Evolution of Chinese society and politics that is characteristic of Chinese institutions and modes of thought from antiquity to 1000. Focus on social, political, intellectual, and economic aspects of early and middle empires. 11B. Circa 1000 to 2000. Survey of later history of China—evolution of characteristic Chinese institutions and modes of thought from circa 1000 to 2000. Focus on social, political, intellectual, cultural, and economic aspects of early modern Chinese society and empires and rise of modern China into contemporary era. 11AH-11BH. History of China (Honors). (5-5) Lecture, three hours; discussion, two hours. Honors sequence parallel to maximum of 3 units of English 2 as a Second Language 36. (Same as Ancient Near East M103A-M103B.) Lecture, three hours; discussion, one hour (when scheduled). Not open for credit to students with credit for former course 103. Course M103A is not requisite for courses M103B. M103A. Sumer and related cultures of Mesopotamia, Egypt, Israel, India, and central Asia (including Afghanistan) between circa 1200 and 2000. 102A. Iran and Persianate World. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Development of model of Persian world to bring together histories of Iran, India, and central Asia (including Afghanistan) between circa 1200 and 2000. Movement and interaction of different peoples between major cultural centers where Persian was used as common language of intellectual, religious, social, and political exchange. Weekly focus on one particular theme, with lecture material supplemented by translations of writings of primary sources, guest speakers, and primary source materials. 91A-91B. World History, circa 600 to 1760. (5) Lecture, three hours; discussion, two hours. Broad thematic survey of world history since the mid-18th century. Examination, through lecture and discussion, of global implications of imperialism, total war, nationalism, cultural change, decolonization, changes in women's rights and roles, and eclipse of world communism. Designed to introduce students to historical study, help them understand issues and dilemmas facing the world today, and prepare them for in-depth work in history of specific regions or countries of the world. P/NP or letter grading.

101. Topics in World History. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of specific historical themes from world historical perspective. May be repeated for credit with instructor change. P/NP or letter grading. C101A-C101B. Variable Topics: Interdisciplinary Studies. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Course C101A is not requisite for Course C101B. Designed for juniors/seniors. May include gender, world history, masculinity, and economic history. May be repeated for credit with topic change. Concurrently scheduled with courses C101A-C220B. P/NP or letter grading.

102A. Iran and Persianate World. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Development of model of Persian world to bring together histories of Iran, India, and central Asia (including Afghanistan) between circa 1200 and 2000. Movement and interaction of different peoples between major cultural centers where Persian was used as common language of intellectual, religious, social, and political exchange. Weekly focus on one particular theme, with lecture material supplemented by translations of writings of primary sources, guest speakers, and primary source materials. 91A-91B. World History, circa 600 to 1760. (5) Lecture, three hours; discussion, two hours. Broad thematic survey of world history since the mid-18th century. Examination, through lecture and discussion, of global implications of imperialism, total war, nationalism, cultural change, decolonization, changes in women's rights and roles, and eclipse of world communism. Designed to introduce students to historical study, help them understand issues and dilemmas facing the world today, and prepare them for in-depth work in history of specific regions or countries of the world. P/NP or letter grading.

91A-91B. World History, circa 600 to 1760. (5) Lecture, three hours; discussion, two hours. Broad thematic survey of world history since the mid-18th century. Examination, through lecture and discussion, of global implications of imperialism, total war, nationalism, cultural change, decolonization, changes in women's rights and roles, and eclipse of world communism. Designed to introduce students to historical study, help them understand issues and dilemmas facing the world today, and prepare them for in-depth work in history of specific regions or countries of the world. P/NP or letter grading.

91A-91B. World History, circa 600 to 1760. (5) Lecture, three hours; discussion, two hours. Broad thematic survey of world history since the mid-18th century. Examination, through lecture and discussion, of global implications of imperialism, total war, nationalism, cultural change, decolonization, changes in women's rights and roles, and eclipse of world communism. Designed to introduce students to historical study, help them understand issues and dilemmas facing the world today, and prepare them for in-depth work in history of specific regions or countries of the world. P/NP or letter grading.

91A-91B. World History, circa 600 to 1760. (5) Lecture, three hours; discussion, two hours. Broad thematic survey of world history since the mid-18th century. Examination, through lecture and discussion, of global implications of imperialism, total war, nationalism, cultural change, decolonization, changes in women's rights and roles, and eclipse of world communism. Designed to introduce students to historical study, help them understand issues and dilemmas facing the world today, and prepare them for in-depth work in history of specific regions or countries of the world. P/NP or letter grading.

91A-91B. World History, circa 600 to 1760. (5) Lecture, three hours; discussion, two hours. Broad thematic survey of world history since the mid-18th century. Examination, through lecture and discussion, of global implications of imperialism, total war, nationalism, cultural change, decolonization, changes in women's rights and roles, and eclipse of world communism. Designed to introduce students to historical study, help them understand issues and dilemmas facing the world today, and prepare them for in-depth work in history of specific regions or countries of the world. P/NP or letter grading.

Lower-Division Courses

100. History and Historians. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for seniors. Study of historiography, including intellectual processes by which history is written, results of these processes, and sources and development of history. Attention also to representative historians. P/NP or letter grading.

101. Topics in World History. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of specific historical themes from world historical perspective. May be repeated for credit with instructor change. Concurrently scheduled with courses C101A-C220B. P/NP or letter grading.
Europe (1945 to 1989), using eight Czech, Polish, and Hungarian films to explore life under state socialist modernization dictatorship. P/NP or letter grading.

121A-121F. History of Modern Europe. (4 each) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.

121A. Renaissance and Reformation, 1450 to 1660. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Reorganiza- tion of power; political, military, and cultural developments of the period. P/NP or letter grading.

121B. Baroque Culture and Absolutist Politics, 1660 to 1715. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Changing nature of state and social domination; rede- ployment of military violence; strategies of population discipline; absolutism and baroque culture; new forms of bureaucratic intervention; representation of family, sexuality, and body; witch persecutions. P/NP or letter grading.

121C. Old Regime and Revolutionary Era, 1715 to 1815. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Enlightened absolutism and reform, challenge of new opinion. Educational, moral, and religious attitudes; mass politics (e.g., Bolshevik Revolution, Italian Fas- cism, national socialism, and Spanish Civil War). P/NP or letter grading.

121D. Bourgeois Century, 1815 to 1914. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Restoration politics, Indus- trial Revolution, uprisings of 1848, unification of Germany and Italy, imperialism, rise of socialism, population growth; changes in social structure, orig- ins of World War I. P/NP or letter grading.

121E. Era of Total War, 1914 to 1945. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. World War I, interval pe- riod, and World War II. Social, cultural, political, and economic aspects, with focus on strain between model of parliamentary democracy and dynamics of mass politics (e.g., Bolshevik Revolution, Italian Fas- cism, national socialism, and Spanish Civil War). P/NP or letter grading.

121F. World War II and Its Aftermath, 1939 to Present. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. World War II, origins and persistence of Cold War, reconstruction in West, de-Stalinization, decolonization, crisis of welfare state, background to and course of 1989 revolu- tions, current political configuration. P/NP or letter grading.

122A-122F. Cultural and Intellectual History of Modern Europe. (4 each) Lecture, three hours; dis- cussion, one hour (when scheduled). Designed for juniors/seniors. Climates of taste and climates of opinion. Educational, moral, and religious attitudes; art, thought, and manners of time in historical context. P/NP or letter grading.

122A. 15th Century. Renaissance culture and intellectual history of Europe. Cen- tral themes include comparative history of ideas, theory and practice of art and architecture, civic and religious humanism, religious experience, and new cultural and intellectual developments. P/NP or letter grading.

122B. 16th Century. P/NP or letter grading.

122C. 17th Century. P/NP or letter grading.

122D. 18th Century. P/NP or letter grading.

122E. 19th Century. (Same as Art History M127C) 122F. 20th Century. P/NP or letter grading.

123A-123B-123C. War and Diplomacy in Europe. (4-4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. 123A. 1650 to 1815. Survey of military and diplomatic history, seen in relation to social and economic development and growth of state. P/NP or letter grading.


124A-124B-124C. History of France. (4-4-4) Lecture, three hours; discussion, one hour (when sched- uled). Designed for juniors/seniors. P/NP or letter grading. 124A. France, 1500 to 1715. Social history of 16th- and 17th-century France, including growth of monarchy, wars of religion, peasant uprisings, popular culture, Catholic resurgence, Louis XIV, and absolute monarchical authority. P/NP or letter grading.


124C. Making of Modern France, 1871 to Present. From oligarchy to democratic bureaucracy in two wars and three republics.

125A. Baroque and Enlightenment Germany. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Development of state institutions, culture, and society in Cen- tral Europe from end of Thirty Years’ War to end of Napoleonic Wars. Consideration of absolutism as political system, and baroque and Enlightenment cultures as new discourses on power and hierarchy. P/NP or letter grading.

125B. Nationalism and Modernization in 19th-Cen- tury Germany. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/se- niors. Problems of class society and state formation, emancipation, intellectual movements, growth of national con- sciousness, emergence of bourgeois public sphere, dynamics of gender in civil society and political life, post-Napoleonic tensions between reform and reaction, 1848, and national unification. P/NP or letter grading.

125C. 20th-Century Germany. (4) Lecture, three hours; discussion, one hour (when scheduled). De- signed for juniors/seniors. The question of how Germany has faced during this century; two world wars, shift from monarchy to republic to national socialism to di- vided nation, and finally reunification. Consideration of political, social, economic, and cultural spheres. P/NP or letter grading.

125D. History of Low Countries. (4) Lecture, three hours; discussion, one hour (when scheduled). De- signed for juniors/seniors. Examination of aspects of Dutch culture on occasion of 400th anniversary. Dutch World, origins and persistence of Cold War, reconstruction in West, de-Stalinization, decolonization, crisis of welfare state, background to and course of 1989 revolu- tions, current political configuration. P/NP or letter grading.

127C. Revolutionary Russia and Soviet Union, (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Revolutions of 1917, Civil War, consolidation of Bolshevik regime; succession crisis and ascendency of Stalin, collectiv- ization and industrialization, foreign policy and World War II; death of Stalin, de-Stalinization, developments since; stagnation or stability? P/NP or letter grading.

127D. Culture and Society in Imperial Russia. (4) Lecture, three hours; discussion, one hour (when scheduled). Recommended preparation: course 127B or Russian 90A or 119. Designed for juniors/seniors. Thematic examination of culture and society in Russia during 18th century and state-sponsored efforts to modernize (1898 to 1917). Topics include nobility, peasantry, and village life from serfdom to postserfdom emancipation, urban so- ciety, working-class life and thought, women, clergy, religion, popular culture, accommodation, and resis- tance. P/NP or letter grading.

128A-128B-128C. History of Italy. (4-4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.

128A. 121A-121F. History of Modern Europe. (4 each) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.

128B. Age of Silver in Spain and Por- tugal, 1479 to 1789. Development of popular history in Iberian Peninsula. Emphasis on peasants and urban history, gold routes, slave trade, history of women, and development of different types of collect- ive violence. 128B. Reform and Revolution in Modern Spain and Portugal, 1789 to Present. Spain’s position in Europe and its potentialities for social change discussed through investigations of urban history, popular social structure, history of women, problems of slow industrial development, imperialism, anarchism, and labor history.

130. History of European Political Thought. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to princ- ial themes in history of European political thought from classical antiquity to close of early modern period. Study of outstanding contributions to historiography, social, political thought as they are presented in texts of major thinkers such as Plato, Aristotle, Machi- avelli, More, Hobbes, Locke, and Rousseau. Recon- struction of broad intellectual and ideological con- texts from which their work emerged to help students make sense of works of political philosophy in their relevant historical setting and to know something about Athenian democracy and its critics, Roman re- public and its empire, Renaissance, early modern Eu- ropean civil wars, American and French Revolutions, and Enlightenment. Focus on emergence of some crucial concepts during this period—ideas about state, self, rights, sovereignty, liberty, private property, and more—that define way we think about politics and society in modern world. P/NP or letter grading.

131A-131B. Marxist Theory and History. (4-4) Lecture, three hours; discussion, one hour (when sched- uled). Course 131A is generally requisite to 131B. De- signed for juniors/seniors. Introduction to Marxist phi- losophy and method; conception of historical stages; competing Marxist analyses of transition from feudalism to capitalism, economic analysis of the capitalist society, theory of politics and state in relationship to historical interpretation of 19th-century European revolutions; capitalist crises. P/NP or letter grading.

132. Topics in European Civilization. (4) Lecture, three hours; discussion, one hour (when sched- uled). May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.
M133A- M135B. History of Women in Europe. (4-4) (Same as Gender Studies M133A-M135B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. History of social, political, and cultural roles of women in Western Europe from early Middle Ages to present. P/NP or letter grading. M133A. 800 to 1715. M135B. 1715 to Present.

M133C. History of Prostitution. (4) (Same as Gender Studies M133C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. History of prostitution from ancient times to present. Topics include tolerate in medieval Europe, impact of syphilis, birth of courtesan, regulation in 18th century, and contemporary global sex trade. Readings include novels, primary sources, and testimony by sex workers. P/NP or letter grading.

134B-134C. Economic History of Europe. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. 134B. 1780 to 1914. Analysis of emergence of European world economy, first Industrial Revolution, revolutionary changes in technology, demographic patterns, education, transportation, and interrelationship between Western core and European peripheries. P/NP or letter grading.

135A-135B-135C. Europe and World. (4-4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. First phase of European expansion in Americas, Africa, and Eurasia. Analysis of motives and methods of expansion, differing patterns of European settlement, including plantation economy, and development of new commercial networks, including Atlantic slave trade. P/NP or letter grading.

135B. Colonialism, Slavery, and Revolution, 1700 to 1870. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Origins and gradual increase of European dominance in world trade, impact of European colonialism in New World, Africa, and Asia, influence of new revolutionary ideologies that took shape in wake of Enlightenment of 18th century, and beginnings of industrialization. P/NP or letter grading.

135C. Imperialism and Postcolonialism, 1870 to Present. (4) Lecture, three hours; discussion, one hour (when scheduled). Survey of major European events and trends and their impact on world in modern period. Interrelationship of European and world history, from partition of Africa to founding of India and Pakistan. Global consequences of Cold War and new place of Europe in world. P/NP or letter grading.

136A-136B-136C. History of Britain. (4-4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Analysis of British economy, society, and polity, with focus on dynamics of both stability and change. P/NP or letter grading.

135A. Tudor-Stuart Times, 1485 to 1715. Political, social, economic, and cultural history of Britain under Tudors and Stuarts. Topics include Reforma-
tion, transformation of economy, establishment of overseas colonies, 17th-century political upheavals and impeachment of political and social political structures. 136B. Making of Modern Britain, 1715 to 1867. Social, economic, political, and cultural history of Britain from Hanovarian revolution in politics to advent of mass democracy in mid-Victorian era. Themes include social change under pressures of industrialization, emergence of first British Empire, loss of America, shifts in religious and social position. 136C. Modern Britain since 1832. 137A-137B. British Empire since 1783. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Political and economic history, including evolution of colonial nationalism, development of commonwealth idea, and changes in British colonial policy. P/NP or letter grading.

138A. Colonial America, 1600 to 1763. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of molding of American society in English North America from 1607 to 1763, three and a half centuries of diverging cultures: Western European, West African, and American Indian. P/NP or letter grading.

138B. Revolutionary America, 1760 to 1800. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Inquiry into origins and consequences of American Revolution, nature of revolutionary process, creation of constitutional national government, and development of capitalist economy. P/NP or letter grading.

138C. U.S. History, 1800 to 1850. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Discussion of major social, political, economic, and cultural transformations of first half of 19th century, and how these changes helped to drive wedge between North and South. P/NP or letter grading.

139A. U.S., Civil War and Reconstruction. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Rise of sectionalism, antislavery crusade, formation of Confederate States; war years; political and social reconstruction. P/NP or letter grading.

139B. U.S., 1875 to 1900. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. American political, social, and institutional history in period of great change. Emphasis on altering concepts of role of government and responses to that alteration. P/NP or letter grading.


141A-141B. American Economic History. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. 141A. 1790 to 1910. Roles of economic forces, institutions, individuals, and groups in promoting or impeding effective change in American economy from 1790 to 1910. During this period technical skeleton of modern industrial structure was formed. Why and how American economy evolved into dual economy, characterized by center of firms large in size and influence and periphery of smaller firms. 141B. 1910 to Present. Dynamics of change in dual economy, with focus in greater detail on interrelationships between developments in economy and on growing interdependency between U.S. and world economy from 1910 to present.

142A-142B. Intellectual History of U.S. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Principal ideas about humanity and God, nature and society, that have been at work in American history. Sources of these ideas, their connections with one another, their relationship to constitutionalism since its evolution into major documents of American thought. P/NP or letter grading.

142C. History of Religion in U.S. (4) (Same as Religion M142C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Consideration of religious dimension of people's experience in U.S. Examination of number of religious traditions that have been important in this country, with emphasis on relating developments in religion to other aspects of American culture. P/NP or letter grading.

142D. American Popular Culture. (4) Lecture, three hours; discussion, one hour (when scheduled). Recommended requisites: courses 13B, 13C. Designed for juniors/seniors. Survey of American cultural history since 1865, with emphasis on historical development of urban, consumer-oriented American mass culture that has helped to drive wedge between North and South. P/NP or letter grading.


144. America in World. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.


145A-145B. U.S. Urban History. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.

145A. U.S. Cities: Overview. Demographic, geographic, political, economic, and social development of U.S. cities in relation to broad trends in U.S. history as well as to their own more special histories. Emphasis on mastery of facts and chronology, and awareness of major theoretical issues and fundamental concepts in urban history. 145B. Topics in U.S. Urban History. Exploration of one aspect of U.S. urban history in depth without having to attend to broader chronology or geographic, political, economic, and social development of U.S. cities in relation to broad trends in U.S. history as well as to their own more special histories. Emphasis on mastery of facts and chronology, and awareness of major theoretical issues and fundamental concepts in urban history. P/NP or letter grading.

146A-146B. American Working Class Movements. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.

146A. U.S. Cities: Overview. Demographic, geographic, political, economic, and social development of U.S. cities in relation to broad trends in U.S. history as well as to their own more special histories. Emphasis on mastery of facts and chronology, and awareness of major theoretical issues and fundamental concepts in urban history. 146B. Topics in U.S. Urban History. Exploration of one aspect of U.S. urban history in depth without having to attend to broader chronology or geographic, political, economic, and social development of U.S. cities in relation to broad trends in U.S. history as well as to their own more special histories. Emphasis on mastery of facts and chronology, and awareness of major theoretical issues and fundamental concepts in urban history. P/NP or letter grading.

146C-146D. U.S. and Comparative Immigration History. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Use of overlapping diaspora model that integrates culture and beliefs worldwide. P/NP or letter grading.
M147C. History of Women in Colonial British America and Early U.S., 1600 to 1860. (4) (Same as Gender Studies M147B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to major themes in history of early American women from initial confrontation of English and American Indian cultures in early 17th century to rise of women's movements in mid-19th century. P/NP or letter grading.

M147D. History of Women in U.S., 1860 to 1980. (4) (Same as Gender Studies M147D) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to major themes in history of American women from abolition of slavery and Civil War to rise and consequences of second-wave feminism. P/NP or letter grading.

M147E. History of Deaf Communities in America. (4) (Same as American Sign Language M126.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of history and culture of deaf communities in America (circa 1850 to present) and major events impacting deaf people, including development of sign language, deaf education, audism, politics of deafness, eugenics, deaf revolution movements, and role of hearing teachers in development of education, growth, and survival of America's deaf community and development of deaf identity over time. P/NP or letter grading.

149A-149B. North American Indian History. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. History of Native Americans from contact to present, with emphasis on development of culture, language, political processes, and continuity of Native American cultures. Focus on selected Indian peoples in each period. P/NP or letter grading. 149A. Precontact to 1600. 149B. 1600 to Present.

M150A. Comparative Slavery Systems. (4) (Same as African American Studies M151A) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of slavery experiences in America and other slave societies, with emphasis on outlining similarities and differences among legal status, treatment, and slave cultures of North American, Caribbean, and Latin American slave societies. P/NP or letter grading.

M150B-M150C. Introduction to Afro-American History. (4-4) (Same as African American Studies M158B-M158C) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of Afro-American experience, with emphasis on three great transitions of Afro-American life: transition from Africa to New World slavery, transition from slavery to freedom, and transition from rural to urban milieu. P/NP or letter grading.

M150D. Recent African American Urban History: Funk Music and Politics of Black Popular Culture. (4) (Same as African American Studies M150D) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of musical genre known as funk that emerged in its popular form during late 1960s and reached popular high point in black culture, during 1970s. Funk, fusion of gospel, blues, jazz, rhythm and blues, soul, rock, and many other musical styles, offers students unique window into recent African American history. P/NP or letter grading.

M150E. African American Nationalism in First Half of 20th Century. (4) (Same as African American Studies M151E) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Critical examination of African American search in first half of 20th century for national/group cohesion through collectively built institutions, associations, organized protest movements, and ideological self-definition. P/NP or letter grading.

M151A. History of Chicano Peoples. (4) (Same as Chicana and Chicano Studies M159A) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey lecture course on historical development of Mexican (Chicano) community and people of U.S. through 20th century, with special focus on labor and politics. Provides integrated understanding of change over time in Mexican community by inquiry into major historical dimensions of culture change. Social structure, economy, labor, culture, political organization, conflict, and international relations. Emphasis on socio-historical development of Chicano society, class, race, and color, culture, and political development and resistance. Development related to historical events of significance occurring both in U.S. and Mexico. Lectures, special presentations, reading assignments, written examinations, library and/or field research, and submission of paper. P/NP or letter grading.

M151B. History of Chicano Peoples. (4) (Same as Chicana and Chicano Studies M159B) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey lecture course on historical development of Mexican (Chicano) community and people of U.S. through 20th century, with special focus on labor and politics. Provides integrated understanding of change over time in Mexican community by inquiry into major historical dimensions of culture change. Social structure, economy, labor, culture, political organization, conflict, and international relations. Emphasis on socio-historical development of Chicano society, class, race, and color, culture, and political development and resistance. Development related to historical events of significance occurring both in U.S. and Mexico. Lectures, special presentations, reading assignments, written examinations, library and/or field research, and submission of paper. P/NP or letter grading.

M151C. Understanding Whiteness in American History and Culture. (4) (Same as Chicana and Chicano Studies CM182) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. History, construction, and representation of whiteness in American society. Readings and discussions trace evolution of white identity and explore its significance to historical construction of race class in American history. Letter grading.

M151D. Chicana Historiography. (4) (Same as Chicana and Chicano Studies M156 and Gender Studies M157) Lecture, four hours. Examination of Chicana historiography with primary purpose of writing of history has placed Chicanas into particular narratives. Using Chicana feminist approaches to study of history, revisiting of specific historical periods and moments such as Mexican American, Mexican Revolution, American Conquest, Mexican Revolution, and Chicano Movement to excavate untold stories about women's participation in and contribution to making of Chicana and Chicano history. P/NP or letter grading.


M154. History of California. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Economic, social, intellectual, and political development of California from earliest times to present. P/NP or letter grading.

M155. History of Los Angeles. (4) (Same as Chicana and Chicano Studies M183) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Social, economic, cultural, and political development of Los Angeles and its environs from time of its founding to present. Emphasis on diverse peoples of area, changing physical environment, various interpretations of city, and Los Angeles' place among America's urban centers. P/NP or letter grading.

156. Topics in U.S. History. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of specific historical themes and/or major issues in U.S. history. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.

157A. Early Latin America. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Advanced survey of Latin American history from conquest to independence, with emphasis on society, culture, and ethnic aspects. P/NP or letter grading.

157B. Indians of Colonial Mexico. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of social and cultural history of Indians of Mexico, especially central Mexico between time of European conquest until Mexican independence, with emphasis on internal view of Indian groups and patterns on basis of records produced by Indians themselves. P/NP or letter grading.

159. Latin America in 19th Century. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Intensive analysis of economic, social, and political problems of Latin American nations from their independence to around 1910. P/NP or letter grading.

160A. Latin American Elitelore. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Elitelore (defined as oral or noninstitutionalized knowledge involving leaders' conceptual and perceptual life history views) in contrast to folklore (followers' traditional or popular views). Elitelore genres include oral history, literature, and cinema. P/NP or letter grading.

160B. Latin American Elitelore to 1910. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of concept of permanent crisis to describe and explain structure of Latin American rent revolution under one-party democracy. Analysis of unresolved colonial and 19th-century problems and crises that have influenced modern-day Mexico, if in modified form. P/NP or letter grading.

161. Topics in Latin America History. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of major issues in history of Latin America. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.

162A. Modern Brazil. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Selected topics in political, economic, social, and cultural development. Emphasis on modernization and struggle for change, 1850 to present. Discussions, films, slides, and guest speakers supplement and complement lectures. P/NP or letter grading.

162B. Brazil and Atlantic World, 1500 to 1822. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of historical relationships between Brazil in its discovery in 1500 to independence in 1822, placing it in context of Portugal's overseas expansion in Asia, Africa, and Americas. Emphasis on Portuguese, indigenous, and African roots of modern Brazil. P/NP or letter grading.
162C. History of Argentina. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. History of economic, political, social, and cultural developments that have shaped Argentinian history from colonial to present time. Emphasis on 19th-century development of agro-export economy and 20th-century formation of mass society. P/NP or letter grading.

164B-164Z. Topics in African History. (4) Each Lecture, three hours; discussion, one hour (when scheduled). Special topics that have continental application rather than specific topics that have colonial and regional topics. P/NP or letter grading.

164B. Africa and Slave Trade. (4) Lecture, three hours; discussion, one hour (when scheduled). Preparation: one prior course in African history at UCLA. Designed for juniors/seniors. Examination of specific topics that have colonial application rather than specific topics that have continental application. P/NP or letter grading.

164C. France and Africa. (4) Lecture, three hours; discussion, one hour (when scheduled). Preparation: one prior course in African history at UCLA. Designed for juniors/seniors. Forced migration of Africans through overseas slave trade was formative event of modern world. Exploration of that experience and its lasting consequences. P/NP or letter grading.

164D. Africa and Diaspora in Global and Comparative Perspective. (4) Lecture, three hours; discussion, one hour (when scheduled). Preparation: one prior course in African history at UCLA. Designed for juniors/seniors. Forced migration of Africans through overseas slave trade was formative event of modern world. Exploration of that experience and its lasting consequences by placing it in its global context—African, American, European, Islamic, and Asian. P/NP or letter grading.


166A-166B. History of West Africa. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Recommended preparation: three prior courses in non-Western history. Designed for juniors/seniors. P/NP or letter grading.

166A. West Africa, Earliest Times to 1800. 166B. West Africa since 1800.

167A. History of Northeast Africa. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of history of Ethiop- opiad, Sudan, and Somalia in regional context of north-east Africa from earliest times to present, with emphasis on economy and society, evolution of state, and influence of Christianity and Islam. P/NP or letter grading.

167B. History of East Africa. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of cultural diversity of east African peoples from earliest times to growth of complex societies, its place within wider Indian Ocean system, and colonial conquest to gaining of independence and postcolonial challenges. P/NP or letter grading.

167C. History of Central Africa. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of history of central Africa from earliest times, with emphasis on establishment of agricultural growth, trade of states, and incorporation of region into world economy. P/NP or letter grading.

168A-168B. History of Southern Africa. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Attention to social and political developments as well as political issues. Fourteen units. P/NP or letter grading. 168A. Origins to 1870. Origins of South African peoples and their interactions to 1870. 168B. Since 1870. Interactions between inhabitants of southern Africa since 1870.


170A. Culture and Power in Late Imperial China. (4) Lecture, three hours; discussion, one hour (when scheduled). Recommended preparation: courses 11A, 11B. Designed for juniors/seniors. Analysis of power and cultural expressions of dominance and resistance in late imperial China (1000 to 1900). Consideration of changing forces, ideas, and social and political institutions. Examination of institutions of state, family, school, and city; idioms of folk religion, death, and afterlife; political, legal, and medical institutions. For body, personal, and social identity; love, sexuality, and private life. P/NP or letter grading.

170B. Selected Topics in Chinese History from 1500. (4) Lecture, three hours; discussion, one hour (when scheduled). Recommended requisite: course 11B. Designed for juniors/seniors. Selected topics that may vary from year to year. Recent offerings include late imperial texts and women in literati culture, feminist movement, women and communist revolution. P/NP or letter grading.

170C. History of Women in China, A.D. 1000 to Present. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Topics include women and family, women in Confucian ideology, women in literati culture, feminist movement, and women and communist revolution. P/NP or letter grading.

170D. 20th-Century China. (4) Lecture, three hours; discussion, one hour (when scheduled). Recommended preparation: courses 11A, 11B. Designed for juniors/seniors. Topics include women and family, women in Confucian ideology, women in literati culture, feminist movement, women and communist revolution. P/NP or letter grading.

171A. Variable Topics in Japanese History. (4) Lecture, three hours; discussion, one hour (when scheduled). Recommended preparation: courses 11A, 11B. Designed for juniors/seniors. Important topics in Japanese historical change, economic development, social questions, and popular culture, as well as media and arts, explored through extensive readings. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.

171B. Medieval Japan: Social and Cultural History. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Political, economic, and cultural development of Japan from prehistory to 1600. P/NP or letter grading.

172A. Japanese Popular Culture. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Japanese women in Japanese and world history through state documents, autobiographical voices, contemporary television, and other varying historical sources, as well as media and arts such as women and new political order (1910 to 1930), women, war, and empire (1930 to 1945), and women in consumer society (1980s to 1990s). P/NP or letter grading.

172B. Japanese Popular Culture. (4) Same as Gender Studies M173B. Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Women and new political order (1910 to 1930), women, war, and empire (1930 to 1945), and women in consumer society (1980s to 1990s). P/NP or letter grading.

172C. Shinto, Buddhism, and Japanese Folk Religion. (4) Same as Religion M173C. Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Social dimension of various Ways, great and little: Shinto's connection with cultural nationalism, Buddhism's medieval Reformation and Zen's relation to warrior culture, folk religious as well as state religions, such as kami, popular worship, and millenarianism. P/NP or letter grading.

173D. Postwar Japanese History through Film. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of postwar Japanese history through medium of film and film criticism. Much of postwar Japanese cinema can be seen as reflecting on and questioning place of Japan in world reshaped by catastrophic war and its lingering specter. Through screenings and critical discussion of select films spanning half-century following World War II, consideration of cultural, aesthetic, and sociopolitical significance of postwar as demarcated category in Japan. Reflection on films which filmic presentations of state of being postwar engaged with lived history, memory, and present time. P/NP or letter grading.

174A. Early History of India. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to civilization and institutions of India. Survey of history and culture of South Asian subcontinent from earliest times to founding of Mughal Empire. P/NP or letter grading.

174B. History of British India I. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of expansion of British Empire to 1757, constitution of India as oriental despotism, epistemological projects of state, and other modes by which British achieved conquest of knowledge. P/NP or letter grading.
174C. Contemporary South Asia. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Political economy of imperialism and Britain’s civilizing mission. Encounter, especially in terms of race and gender, between colonizers and to questions of resistance and nationalism. P/NP or letter grading.

M174D. Indo-Islamic Interactions, 700 to 1750. (4) (Same as Religion M174D.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Historical introduction to Muslim communities of what eventually became nations of India, Pakistan, and Bangladesh. Topics include social, political, religious, and cultural history. P/NP or letter grading.

M174E. Indo-Islamic Interactions, 1750 to 1947. (4) (Same as Religion M174E.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of interplay of factors that, from Christian missionaries to Islamic madrasa schools and colonial rebellions, gave shape to multifaceted Muslim reformation in context of colonial modernity. P/NP or letter grading.

174F. Gandhi and Making of Modern India. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of life and ideas of Mahatma Gandhi, known world over as prophet of nonviolence and principal architect of Indian independence movement. Gandhi was also spiritual thinker, social reformer, critic of Western modernity, interpreter of Indian civilization, staunch supporter of Indian communal values, and his nonviolent campaigns against colonial rule, before moving to broader assessments of his life and thought, his critiques of modernity and industrial civilization, and Indian nationalism. P/NP or letter grading.

175A. Cultural and Political History of Contemporary South Asia. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Problem of modernity; partition of India and emergence of Pakistan; political, social, ecological, and women’s movements; struggles for rights and conflicts of identity among Muslims, Hindus, and Sikhs; terrorism in Sri Lanka and Pakistan; public culture, popular cinema, and street life. P/NP or letter grading.

175B. Special Topics in Contemporary Indian History. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Treatment of major topics in contemporary India. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.

175C. History of Southeast Asia to 1815. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Social, cultural, and political history of Southeast Asia. Macao’s Portuguese presence in 16-17th centuries; expansion of European influence in political and economic spheres, growth of nationalism, and process of decolonization. P/NP or letter grading.

175D. History of Southeast Asia: Southeast Asia since 1815. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. History of modern Southeast Asia, with emphasis on expansion of European influence in political and economic spheres, growth of nationalism, and process of decolonization. P/NP or letter grading.

176A. Philippine History. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Social, cultural, and political history of Philippine societies from Spanish conquest through independence. Emphasis on questions of identity under colonialism, understanding Revolutions of 1896 and 1898, and politics of Philippine nationalist discourse. Readings include introduction to major issues in Philippine historiography and literature. P/NP or letter grading.

176B. Philippine History. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of major issues in Philippine history. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.


181A. India and Jewish History. (4) (Same as Jewish Studies M181A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of major issues in Jewish history of modern India. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.

181B. Jews in Los Angeles: Representation, Memory, and History in Digital Age. (4) (Formerly numbered M181BLS.) (Same as Jewish Studies M181BLS.) Lecture, three hours; fieldwork, two hours. Designed for juniors/seniors. History of Los Angeles Jews, with special emphasis on pivotal roles Jews have played in shaping Los Angeles and role that Los Angeles has played in reshaping Jewish identities, communities, and cultures. Exploration of themes related to regionalism in American Jewish history; comparative immigration and settlement patterns, and the history of Jews in Los Angeles, they were met by a history of Los Angeles Jews through research institutions and of changing American Jewish history projects. P/NP or letter grading.

181C. Science and Technology in 20th Century. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of major issues in Jewish history. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.

182A. Ancient Jewish History (4) (Same as Jewish Studies M182A and Religion M182A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of political, social, and religious developments. P/NP or letter grading.

182B. Medieval Jewish History. (4) (Same as Jewish Studies M182B and Religion M182B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of unfolding of Jewish history from rise of Christianity to expulsion of Jews from Spain in 1492. P/NP or letter grading.

182C. Modern Jewish History. (4) (Same as Jewish Studies M182C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of unfolding of Jewish history from rise of Christianity to expulsion of Jews from Spain in 1492, followed by transformations in Jewish society and identity over five centuries in Europe and Middle East, and concluding with nationalism. P/NP or letter grading.

183A-183B. Third Reich and Jews. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.


184A. Jewish Civilisation: Encounter with Great World Cultures. (4) (Same as Jewish Studies M184A and Religion M184A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of dynamic and millennia-old interaction of Jews with great world cultures. Creative adaptations that have lent Jewish culture its distinct and various forms. P/NP or letter grading.

184B. History of Anti-Semitism. (4) (Same as Jewish Studies M184B and Religion M184B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of origins and historical development of anti-Semitism. P/NP or letter grading.
M184C. American Jewish Experience. (4) Same as Jewish Studies M184C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Experience of Jews in America, both historical and contemporary. P/NP or letter grading.

M184D. History of Feminism in the Study of Israel. (4) (Same as Jewish Studies M184D.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of history of State of Israel from 1948 to present. P/NP or letter grading.

185A. History of Religions: Myth. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Nature and function of myth in modern and ancient religions. Examples selected from nonliterate as well as from other Asian and European traditions. P/NP or letter grading.

185B. Religions of South and Southeast Asia. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Topics vary from year to year and include religions of India and East Asia. May be repeated for credit. P/NP or letter grading.

185C. Religions of South and Southeast Asia. (4) Lecture, three hours; discussion, one hour (when scheduled). Required: course 4 or 185A. Designed for juniors/seniors. Topics vary from year to year and include religions of India and East Asia. May be repeated for credit. P/NP or letter grading.


191DC. CAPP Program Washington, DC. (4) (Formerly numbered M191DC.) Same as Communication M191DC, Political Science M191DC, and Sociology M191DC.) Seminar, three hours; laboratory; 24 hours. Limited to CAPP Program students. Seminars for undergraduates and graduate students in Center for American Politics and Public Policy’s program in Washington, DC. Focus on development and execution of original empirical research project. Meets Washington, DC-based field placements. Study of variety of qualitative methods (observation, interviewing, etc.), with comparison to quantitative analysis. Examination of features of political, social; economic, political, and religious contexts. P/NP or letter grading.

M198A. Women and Gender, Prehistory to 1792. (Formerly numbered M187A.) Same as Political Science M198A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of history of women, gender, and sexuality during this period. First half deals with period before written history and asks when did gender appear? How and why did patriarchy develop? Topics include evolution of women’s bodies, appearance of men’s and women’s contributions to neoclassical revolution, significance of Goddess artifacts, creation myths, and women and sexuality in different religions. Consideration of effects of European conquest on Mediterranean monotheistic empires, power in monarchies, gender dimensions of Atlantic slavery, and first manifestations of feminist consciousness in second half. Objects or texts created by women examined or read throughout. P/NP or letter grading.

195. Community or Corporate Internships in History. (4) Tutorial, three hours. Limited to juniors/seniors. Internship in supervised setting in community agency or business. Students meet on regular basis with instructor and provide periodic reports of their experience. May be repeated for credit with supervising faculty member required. P/NP or letter grading.

195CE. Community and Corporate Internships in History. (4) Tutorial, to be arranged; fieldwork, eight to 16 hours. Limited to juniors/seniors. Internship in corporate, governmental, or nonprofit setting coordinated through Center for Community Learning. Students complete written assignments and attend biweekly meetings with graduate student coordinator, and write final research paper. Faculty sponsor and graduate student coordinator construct series of research assignments that examine issues related to internships in cultural, social, economic, political, and religious contexts. P/NP or letter grading.

Graduate Courses

200A-200U. Advanced Historiography. (4 each) Seminar, three hours. May be repeated for credit.


204A. Department Seminar: Approaches, Methods, Debates, Practice. (4) Seminar, three hours. Introduction to types of oral history; preinterview, interview, and postinterview procedures; methods of compilation and evaluation. Field assignments, analysis, and/or paper based on interviews. S/U or letter grading.

204B. Department Seminar: Many Professions of History. (4) Seminar, three hours. Introduction to practice, method, and theory of oral history.


206A-206B. Seminar: Near East History. (4-4) Seminar, three hours. Course 206A is requisite to 206B. In Progress (206A) and letter (206B) grading.

210A. Topics in History. (4) Seminar, three hours. Course 210A is requisite to 210B. Designed for graduate students and focused on topics of importance to the field. May be repeated for credit. S/U or letter grading.

211A-211B. Seminars: Armenian History. (4-4) Seminar, three hours. Course 211A is requisite to 211B. In Progress (211A) and letter (211B) grading.

212. Methods in Armenian Oral History. (4) Seminar, three hours. Uses and techniques of Armenian oral history; preinterview, interview, and postinterview procedures; methods of compilation and evaluation. Field assignments, analysis, and/or paper based on interviews. S/U or letter grading.


213C. History of Women, Men, and Sexuality in History. (4) Seminar, three hours. Limited to graduate students. Exposure to newest branch of gender history: study of masculinity. Focus not on men per se, but on values, practices, and texts that constitute masculinity as one gender. Readings focus on broad range of chronological periods from antiquity to 20th century and geographical areas including Americas, Asia, Europe, and Middle East. S/U or letter grading.

214. Topics in World History. (4) Seminar, three hours. Course 214 is requisite to 215B. Preparation: reading knowledge of German or French. Reading of primary sources and the history of the political, social, and economic processes and their uses in historical research. In Progress (236B) and letter (236C) grading.

215A-215B. Seminars: Ancient History. (4-4) Seminar, three hours. Course 215A is requisite to 215B. In Progress (215A) and letter (215B) grading.

216A-216B. Seminars: Byzantine History. (4-4) Seminar, three hours. Course 216A is requisite to 216B. In Progress (216A) and letter (216B) grading.

217. Sources and Handbooks of Medieval History. (4) Seminar, three hours. Preparation: reading knowledge of German or French. Reading of primary sources and the history of the political, social, and economic processes and their uses in historical research. In Progress (236B) and letter (236C) grading.

221A-221B. Seminar: Medieval European History. (4-4) Seminar, three hours. Course 221A is requisite to 221B. In Progress (221A) and letter (221B) grading.
246A-246B. Introduction to U.S. History. (4-4) Seminar, three hours. Course 246A is requisite to 246B. In Progress (246A) and letter (246B) grading.

249A-249B. Seminars: African American History. (4-4) Seminar, three hours. Course 249A is requisite to 249B. In Progress (249A) and letter (249B) grading.

250A-250B. Seminars: U.S. History of Middle 19th Century. (4-4) Seminar, three hours. Course 250A is requisite to 250B. In Progress (250A) and letter (250B) grading.

251A-251B. Collaborative Research Seminars: American History. (4-4) Seminar, three hours. Research seminar under the direction of two faculty members. In Progress (251A) and letter (251B) grading.

252A-252B. Seminars: Recent U.S. History to 1930. (4-4) Seminar, three hours. Course 252A is requisite to 252B. In Progress (252A) and letter (252B) grading.

253A-253B. Seminars: Recent U.S. History since 1930. (4-4) Seminar, three hours. Course 253A is requisite to 253B. In Progress (253A) and letter (253B) grading.

254A-254B. Seminars: U.S. Social and/or Intellectual History. (4-4) Seminar, three hours. Course 254A is requisite to 254B. In Progress (254A) and letter (254B) grading.

255A-255B. Business Enterprise and American Culture. (4-4) Seminar, three hours. Course 255A is requisite to 255B. In Progress (255A) and letter (255B) grading.

256A-256B. Seminars: America in World. (4-4) Seminar, three hours. Course 256A is requisite to 256B. In Progress (256A) and letter (256B) grading.

257A-257B. Seminars: U.S. Urban History. (4-4) Seminar, three hours. Course 257A is requisite to 257B. In Progress (257A) and letter (257B) grading.

258A-258B. Seminars: Working Class History. (4-4) Seminar, three hours. Course 258A is requisite to 258B. In Progress (258A) and letter (258B) grading.

M259A-M259B. History of Women. (4-4) Seminar, three hours. Course M259A is requisite to M259B. History of women's social and political issues seen in U.S. history from the Colonial period to the present. Each course may be taken 1790 to 1900.

260A-260B. Seminars: Afro-American History. (4-4) Seminar, three hours. Course 260A is requisite to 260B. In Progress (260A) and letter (260B) grading.

261A-261B. Seminars: Afro-American History. (4-4) Seminar, three hours. Course 261A is requisite to 261B. In Progress (261A) and letter (261B) grading.

262A-262B. Seminars: Chicano History. (4-4) Seminar, three hours. Course 262A is requisite to 262B. In Progress (262A) and letter (262B) grading.

263A-263B. Seminars: History of American West. (4-4) Seminar, three hours. Course 263A is requisite to 263B. In Progress (263A) and letter (263B) grading.

M264. History of American Education. (4) Same as Education M201C) Discussion, three hours. History of educational thought and of social forces impinging on American education from 1850s to present. Analysis of relation between these ideas and forces, and aims and practices of American education today. S/U or letter grading.

266A-266B. Seminars: Colonial Latin American History. (4-4) Seminar, three hours. Course 266A is requisite to 266B. In Progress (266A) and letter (266B) grading.

M266C. Analyzing Historical Texts. (4) Same as Linguistics M238) Seminar, four hours. Designed for graduate students. Analysis of linguistic structure and ethnohistorical context of legal and other documents written by native-speaking scribes and translators. Topics include paleographic technique and text analysis software. May be repeated for credit. S/U grading.

267A-267B. Seminars: Latin American History, 19th and 20th Centuries. (4-4) Seminar, three hours. Course 267A is requisite to 267B. In Progress (267A) and letter (267B) grading.

M268A-M268B. Seminars: Recent Latin American History. (4-4) Same as Latin American Studies M268A-M268B) Seminar, three hours. Course M268A is requisite to M268B. Reading knowledge of Spanish and Portuguese normally required. Seminar devoted to selected topics of interdisciplinary nature. In Progress (268A) and letter (268B) grading.

275A-275B. Colloquia: African History. (4-4) Seminar, three hours. Designed for all entering and continuing graduate students in African history. Source identification, research methodologies, historiographical traditions, historical interpretation, approaches to teaching, and research design. Forum for critical discussion of dissertation prospectuses and work in progress. Each course may be taken independently for credit. S/U or letter grading.


282A-282B. Seminars: Chinese History. (4-4) Seminar, three hours. Course 282A is requisite to 282B. In Progress (282A) and letter (282B) grading.

285A-285B. Seminars: Japanese History. (4-4) Seminar, three hours. Course 285A is requisite to 285B. In Progress (285A) and letter (285B) grading.

M286. Japan in Age of Empire. (4) Same as Anthropology M247P) Seminar, four hours. Japan expanded its empire into East and Southeast Asia between 1850 and 1945. Topics include the array of anthropological studies conducted in Japan's colonies and occupied areas in this hardly explored part of the world. Draft papers. May be repeated for credit. S/U or letter grading.

M287. Central Asian Studies: Discipline, Methods, Debates. (2) Same as Anthropology M247Q) Seminar, two hours. Introduction to study of central Asia as practiced in humanities and social sciences disciplines. S/U grading.

288A-288B. Seminars: South Asia. (4-4) Seminar, three hours. Course 288A is requisite to 288B. In Progress (288A) and letter (288B) grading.

289A-289B. Seminars: Southeast Asia. (4-4) Seminar, three hours. Course 289A is requisite to 289B. In Progress (289A) and letter (289B) grading.

291A-291B. Seminars: Jewish History. (4-4) Seminar, three hours. Course 291A is requisite to 291B. Studies in intellectual and social history of Jewish people from ancient times to modern period. In Progress (291A) and letter (291B) grading.

293A-293B. Seminars: History of Religions. (4-4) Seminar, three hours. Course 293A is requisite to 293B. In Progress (293A) and letter (293B) grading.

294A-294B. Western Science, Religion, and Political Economy, 1600 to 1830. (4-4) Seminar, three hours. Study of science integrated within matrix of religious belief commonplace in early modern Europe and, to a lesser extent, in American colonies. Examination of relationship of both cultural matrices to political and economic change. Topics vary according to participating faculty. May be repeated for credit with consent of instructors. S/U or letter grading.

295. Theories of Scientific Change. (4) Seminar, three hours. Historical and philosophical perspectives on science, focusing on rationality of scientific change and logic and psychology of scientific discovery. Readings and seminar-style discussions of such authors as Popper, Kuhn, Toeltlin, Lakatos, Holton, Buchanan, Feyerabend, and others.

297A-297B. Seminars: History of Science. (4-4) Seminar, three hours. Course 297A is requisite to 297B. In Progress (297A) and letter (297B) grading.

M298. Interdisciplinary Studies in 17th and 18th Centuries. (4) Same as English M298) Discussion, four hours. Topics vary according to participating faculty. May be repeated for credit. S/U or letter grading.

M299. Interdisciplinary American Studies. (6) Same as English M299) Discussion, four hours. Readings, discussions, and papers on common theme, team-taught by faculty members from different departments. Topics vary according to participating faculty. May be repeated for credit with consent of instructors. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel in employment as single assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated once. S/U grading.

490. Writing Workshop for Graduate Students. (4) Tutorial, three hours. Writing workshop on students' papers-in-progress. Analysis and group discussion of rhetorical and stylistic principles, illustrated in students' own and in professional historians' work, help students improve their own writing. May be repeated once. S/U grading.

495. Teaching History. (4) Seminar, to be arranged. Preparation: graduate students in need of peer teaching assistantship. Lectures, readings, discussions, and practice teaching sessions within the structure of a seminar. Students receive unit credit toward full-time equivalence but not toward the nine-course requirement for MA degree. S/U grading.

501. Cooperative Program. (2 to 8) Preparation: consent of UCLA graduate advisor and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Directed Studies. (1 to 8) Limited to graduate students. Required of all new teaching assistants. Lectures, readings, discussions, and practice teaching sessions within the structure of a seminar. Students receive unit credit toward full-time equivalence but not toward the nine-course requirement for master's degree. S/U grading.

597. Directed Studies for Graduate Examinations. (1 to 8) Preparation for MA comprehensive examination or PhD qualifying examinations. S/U grading.

599. PhD Research and Writing. (1 to 8) Preparation for PhD candidacy. S/U grading.
3. Personal Brain Management. (5) Seminar, four hours. Designed for College Honors students. Available psychotherapies, educational media, and drugs can alter our way of thinking. New wave of information technologies and biotechnologies is changing existing landscape. Seminar aimed at considering neuroplastic brain-changing effects, consideration of future developments, and engagement of students in discussion on ethical and philosophical implications of these developments. P/NP or letter grading.

5. Representing Cleopatra: History, Drama, and Film. (5) Seminar, three hours. Examination of legendary queen of Egypt as seen by her contemporaries and study of myths about her and ways in which subsequent cultures and eras have imagined her in literary, visual, and cinematic representations. P/NP or letter grading.

6. Energy Issues: Before and Now. (5) Seminar, three hours. Review of physics and chemistry of concepts of energy, history over ages of turning of discoveries into products in this area, including use of fossil fuel, and discussion of current energy issues, including alternative energies. P/NP or letter grading.

7. Saint and Heretic: Joan of Arc and Gilles de Rais, History and Myth. (5) Seminar, three hours. Examination of both history of Joan of Arc and Gilles de Rais and of way in which, over time, their histories became known to us, by various agendas including national identity, beaification, and gender politics. P/NP or letter grading.

8. Life, Death, and Everything in Between. (5) Seminar, three hours. Designed for College Honors students. Literature course with classic texts used to explore various aspects of human condition as they relate to health and illness. Broad themes including creation, death, deformity, madness, contagion, infirmity, and alienation to be drawn from texts spanning Shakespeare to Plath. Texts selected to illuminate one central aspect of human experience to be examined in its historical context and in contemporary practice of medicine. Exploration of social, philosophical, and ethical issues pertaining to each theme and timely and controversial aspects of modern healthcare. P/NP or letter grading.

9. Visual Communication and Scientific Principles. (5) Seminar, four hours. Opportunity for collaboration between those in science-related disciplines and those in art/humanities-related disciplines. New ways in which science and science communication is mediated, using tools, techniques, and media that are typically outside science education. Science students learn innovative ways of presenting scientific data and design and design, media, and art students learn how to apply their skills to topics they might not usually address. P/NP or letter grading.

10. Language and Gender: Introduction to Gender Differences and Stereotypes. (5) Seminar, four hours; discussion, one hour. Designed for College Honors students. Prior knowledge of any foreign language not required. Introduction to language from sociocultural perspective of gender. Use of research and examples primarily in English, Japanese, and Russian to explore nature of and stereotypes about male and female gender/roles and gendered language, as reflected in lexicon, language behavior, phonetics and intonation, and language acquisition and linguistic change. P/NP or letter grading.

11W. Postmodern Culture. (5) Seminar, four hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Exploration of theories and art (literature, music, film, fine art) that emerged after World War II in what has come to be known as postmodern era. Art criticizes master narratives of civilization in fragmented, skeptical, postmodern, and fragmented perceptions of knowledge, media creating reality, and globalization in industry and society. Satisfies Writing II requirement. Letter grading.

12. Sacred Form: Literature and Poetry in India from Bronze Age to Premodern Times. (4) Seminar, three hours. Exploration of cultural and literary development in India from early religious poetry (prior to 1000 B.C.E.) to broad range of literary styles and diverse religious and philosophical movements through classical, medieval, and premodern period. P/NP or letter grading.

13. Inquiry in Numbers. (5) Seminar, four hours. Preparation: high school algebra. Designed for College Honors students. Teacher loves mathematics and to see mathematics as mathematicians do, not as means to end, but as beautiful and artful in its own right, including elementary number theory and study of whole numbers. Development of rich and elegant theory of prime numbers, factorization, and modular arithmetic. P/NP or letter grading.

14. Interaction of Science and Society. (5) Seminar, three hours. Examination of interaction of science and society and effects of this interaction on history, development of societies, evolution of revolutionary ideas as modeled in Galileo, Darwin, and others, and selected contemporary issues such as genetic engineering and war against infectious diseases. P/NP or letter grading.

15. Symmetry. (5) Seminar, four hours. Symmetry is one of fundamental intellectual frameworks of civilization, that permeates science, art, and everyday endeavors. Symmetry as it appears in mathematics, physics, and biology. Connections to and discussion of visual arts and music. Guest speakers from art community to complement scientific point of view. P/NP or letter grading.

16. Science of Singing Voice. (5) Seminar, three hours. Study of methods, including computer laboratory work, of quantifying aspects of singing. Study of students’ own vocal productions as well as recorded samples of famous singers. P/NP or letter grading.

17. Art, Entertainment, and Social Change. (5) Seminar, three hours. Designed for College Honors students. Integrative examination of evolving impact of arts and entertainment industry on such various aspects of social change as environmental movements, politics and elections, economy, local politics, and community. P/NP or letter grading.

18. Trial of Socrates. (5) Seminar, three hours. Examination of life and times of Socrates and trial that led to his execution, including in-class staging. P/NP or letter grading.

20. What Is This Thing Called Science?: Nature of Modern Science. (5) Lecture, three hours; discussion, one hour. Exploration of difference between scientific and other systems of constructing meaning and society and effects of this interaction on history and philosophy of science and examination of its reliability as objective knowledge. P/NP or letter grading.

21W. Rise and Fall of Modernism. (5) Seminar, three hours; writing laboratory, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Study of early and middle 20th-century’s attempt to construct significance in a general climate of disillusionment by way of literature, literary criticism, and other intellectual movements. Satisfies Writing II requirement. Letter grading.

22. Comparative Odysseys. (5) Seminar, three hours. Designed for College Honors students. Greek and Chinese classics have in common two modes of heroism: one glorifying prowess and another celebrating mental cunning. Both modes are associated principally with men motivated by piety and honor. Interpretation of these traditional constructions of heroism, particularly conflation of courage and violence. Readings include *Writer as Migrant* by Jin Ha, *Odyssey* by Homer, *Journey to West* by Anthony Yu, *Tripmaster Monkey* by Maxine Hong Kingston, and *Ignorance* by Milan Kundera. P/NP or letter grading.

23. Political Dissidence Today and in Ancient Greece: Trial and Death of Socrates in Its Classical and Contemporary Context. (5) Seminar, three hours. Study of trial and death of Socrates by examining its relevance today to legal treatment of dissent and civil disobedience in the U.S. and to variety of contemporary theories and strategies of civil disobedience. Introduction to Greek legal system, values that animated that system, and new ways to think about roles of law. P/NP or letter grading.
24. We Could Be Heroes: Race, Gender, and the Contemporary Hero Narrative. (9) Seminar, four hours. Ways in which hero narratives represent and work through issues of racial and gender identity. Interdisciplinary consideration of hero narratives in film alongside various literary and media arts genres including graphic novel, blaxploitation films, hip-hop concept music, animated television series, and novel. Critical reading and analysis of these texts to question often-repeated racial and gender politics embedded in these cultural productions as way to access role that racial and gender dynamics have on world at large. P/NP or letter grading.

25. Politics and Popular Judgment: Justice, Rights, and Emotions. (9) Seminar, four hours. How to combine judgment and emotions without them standing in way of justice, including our ability to listen and respond to pain of others. What should our government’s political life be? Should it be our reason or our emotions? Or is there some way to combine the two? Exploration of these questions through debates on place of emotions in politics, homo/aesthetics to contemporary thinkers within philosophical frameworks. P/NP or letter grading.

26. Representing Medicine: Art, Literature, and Film. (5) Seminar, four hours. Limit to Freshman Summer Program students. Exploration of interdisciplinary medical representation, with emphasis on cross-cultural 20th-century portrayals of profession, including representations of doctor/patient relations, healthcare sites and circumstances, aging, institutional violence, and mental health. Offered in summer only, P/NP or letter grading.

27. Varied Mathematics. (5) Seminar, four hours. Informal approach to mathematics and engineering topics. Ideas through stories from historical and anthropological perspectives. Identification of topics that cause difficulties in traditional mathematics. Examples emphasize practical solutions. In place of terms used in mathematics, relevant views from popular culture, including playing card games and student contributions. Sources include computer, control, space, and other contemporary scientific issues, and reckoning cases from East Asia, South America, and Polynesia. P/NP or letter grading.


29. Imagining Human Rights. (5) Seminar, four hours. Introduction to debate on international human rights. History of natural rights and examination of rise and limitations of the scientific method—what questions they would be needed, and what obstacles would have to be overcome just to address this question. P/NP or letter grading.


35. Scientific Method: Critical Inquiry into Questions of Extraterrestrial Life. (4) Lecture, three hours; discussion, one hour. Course does not presume to answer question of whether life on other worlds exists. Students engage in comparative and interdisciplinary discussions exploring how and why idea of human rights demands critical imagination. P/NP or letter grading.

36. Global Geographies and Idea of Home. (5) Seminar, three hours. Designed for College Honors students. Home is potently symbolic notion across eras and cultures, one that we all must have and to which we may return. Broader notions of home, as homeland, inescapably form basis of conflicts between people and nations. Investigation of what home is through chosen examples of indigenous and global notions of space, place, longing, belonging, exile, and return, and through lighter vibrant works of literature, film, and performance. P/NP or letter grading.

37W. Sample Readings: Politics and Cultural Appropriation. (5) Seminar, three hours; laboratory, two hours. Enforced requisite: English Composition 3 or English as a Second Language 36. Limited to College Honors students. Contemporary media literacy has spurred production of amateur remixes of songs, films, images, and other media texts. But this is only one moment within far-reaching genealogy of cultural appropriation. Use of remix as lens through which to explore aesthetics and politics of historical and contemporary forms of cultural appropriation, including remixes of political speech, viral video, and TV genres. Examination of fine line between honorific cultural allusion and allegations of theft. Satisfies Writing II requirement. P/NP or letter grading.

38. Film and History/Film as History. (5) Seminar, four hours. Designed for College Honors students. How do films reflect on, and even constitute, historical events? Examination of relationship between film and history and some ways in which film has functioned as history. Traditionally, a vehicle of film and history from silent era to postfilm digital present, exposure to major issues in scholarly body of work in film and media studies while also learning about ways that film can give shape to the history of a nation. P/NP or letter grading.

39. Philosophy Ramble. (5) Seminar, three hours. Designed for College Honors students. Grounded in Aristotelian-style philosophy found in Martha Nussbaum’s Quality of Life and PM’s Hacker’s Intellectual Powers. Prompted by wide range of philosophical readings and employing Socratic method of asking questions, examination of place in our lives—especially our civic lives—of attention, memory, will, science, prudence, and assessment/creation of self. Like Aristotle’s peripatetic version of Plato’s Academy, class takes regular walks together, using UCLA and W PA/FSA photography; and in, studying popular culture in historical tradition of exercising both body and mind. P/NP or letter grading.

40W. Transformations of Cultural Stories across Disciplines and Texts. (5) Seminar, four hours. Enforced requisite: English Composition 3 or English as a Second Language 36. Tracing of writing and rewriting of traditional story types, specifically the adventure story as represented by Defoe’s Robinson Crusoe and its remanifestations in Coetzee’s Foe and the fairy tale as represented by Cinderella and its various cross-cultural remanifestations. Satisfies Writing II requirement. Letter grading.

41. Understanding Ecology: Finding Interdisciplinary Solutions to Environmental Problems. (5) Seminar, four hours. Exploration of ecological basis of planet’s most critical environmental issues, including global climate change, ocean acidification, biodiversity loss, deforestation, pollution, and declining freshwater sources and fisheries. Examination of both hard scientific and interdisciplinary solutions (social, political, educational) to environmental problems. P/NP or letter grading.

43W. Science, Rhetoric, and Social Influence. (6) Seminar, four hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Science writing, particularly scientific texts, both contemporary and historical, that have been used to communicate science to and influence large groups of people beyond their behavior. What is it about certain scientific texts that change way we think and have potential to affect social policy? Texts cover variety of topics from evolution to nutrition and food industry to current debates about climate change. Students encouraged to practice science writing themselves. Satisfies Writing II requirement. Letter grading.

44. Society of Excess: On Waste, Consumer Culture, and Environment. (5) Seminar, three hours. Designed for Freshman Summer Program students. Examination of rise of waste in both real and virtual worlds, looking in interdisciplinary ways at various cultural representations of trash set against backdrop of society of excess and environment constantly threatened by overloading and mismanaged waste, including social and cultural responses to physical waste and cyber battle against Internet debris. P/NP or letter grading.

45W. Ethics in Social Context: A Critical Perspective on Drug Use, Abuse, Treatment, and Intervention. (5) Seminar, three hours. Examination of drug use and abuse and consequent social issues and policies both historically and in the contemporary U.S., including discussion of current research on neurobiological properties of different drugs and corresponding clinical interventions. P/NP or letter grading.

46. Politics of Reproduction. (4) Seminar, three hours. Enforced requisite: English Composition 3 or English as a Second Language 36. Tracing of writing and rewriting of traditional story types, specifically the adventure story as represented by Defoe’s Robinson Crusoe and its remanifestations in Coetzee’s Foe and the fairy tale as represented by Cinderella and its various cross-cultural remanifestations. Satisfies Writing II requirement. P/NP or letter grading.

51. Music and Society. (5) Seminar, four hours. Minimal experience reading music desirable but not required. Analysis of Western art music, with focus primarily, but not exclusively, on music of late-18th through early-20th centuries through multiple analytical prisms: sociological, historical, political, and musical. P/NP or letter grading.

55. Culture and History of Utopias. (4) Seminar, three hours. Study of major utopian writings from Thomas More’s classical text to recent ecological and feminist utopian texts, with purpose of uncovering social, intellectual, and cultural landscapes underlying quest for a more perfect society. P/NP or letter grading.

57. Language, Performance, and Culture. (5) Lecture, four hours. Mixture of lecture and discussion on topic of language and its relationship to performance and culture in 19th and 20th centuries. Study of theorists such as Saussure, Wittgenstein, Stanley Cavell, Judith Butler, and others, playwrights such as Wilde, Stein, and Samuel Beckett, and films such as “His Girl Friday” and “Monkey Business.” P/NP or letter grading.

59W. Literature and Culture of the American South. (6) Seminar, four hours; writing laboratory, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Examination of historical imaginative landscapes as it is expressed in such writers as William Faulkner, Allen Tate, Flannery O’Connor, Richard Wright, and Zora Neale Hurston; in Civil War and WPA/FSA photography; and in Southern rhetoric and political documentary. Satisfies Writing II requirement. Letter grading.

63W. Nabokov and Reading Minds. (5) Seminar, four hours. Enforced requisite: English Composition 3 or English as a Second Language 36. Designed for College Honors students. Introduction to the major works by Vladimir Nabokov, Russian-American writer, teacher, translator, lepidopterist, and composer of chess problems. Nabokov’s eclectic writings lend themselves well to practice of cognitive criticism—a way of understanding world through relationship between literacy and thought. Reading and writing about art and science built into course. Satisfies Writing II requirement. Letter grading.
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64. Neuroscience and Psychology of Art and Biological Aesthetics. (5) Seminar, three hours. Interdisciplinary approach to study of premise that beauty, whether of faces, art works, or other subjects, is processed by brain and can be understood as neurologically and psychological phenomenon. P/NP or letter grading.

65W. Body-Mind Literacy. (6) Seminar, four hours. Enforced requisite: English Composition 3. Designed for College Honors students. Exploration of relationship between body and mind: when are they most in harmony and when are we alienated from this potential unity? When do we value one part of ourselves over another and why? What cultural, social, political, and personal influences determine answers to these questions? Topics include Cartesian dualism, pluralistic intelligence, mental and physical health, and views of body/mind as integrated unit. Satisfies Writing II requirement. P/NP or letter grading.

70A. Genetic Engineering in Medicine, Agriculture, and Law. (5) Lecture, three hours; discussion, two hours. Not open to students with credit for Life Sciences 3, 4, former Microbiology 7, or Molecular Cell, and Developmental Biology 7G. Historical and scientific study of genetic engineering in medicine, agriculture, and law, including examination of social, ethical, and legal issues raised by new technology. P/NP or letter grading.

70AL. Gene Discovery Laboratory. (5) Seminar, three hours; laboratory, five hours. Recommended requisite: course 70A. Laboratory work in genomics research sheds light on question that apply genetically concepts and techniques taught in course 70A. P/NP or letter grading.

71. Cross-Cultural Approaches to Media History and Culture. (6) Seminar, three hours. Examination of media, media history, and media culture from cross-cultural perspective, one that demands redefinition of media and understanding of art in cross-cultural context. P/NP or letter grading.

73. Elementary Particles in the Universe. (4) Lecture, two hours; discussion, 90 minutes. No special mathematical knowledge required. Examination of elementary particle physics, including status of its current study in laboratories around the world and its role in assessing the early evolution of the universe. P/NP or letter grading.

77. Greeks and Persians: Ancient Encounters from Herodotus to Alexander. (6) Seminar, three hours. Designed for College Honors students. Study of changes in relationships between Greeks and Persians in antiquity, from origin of Achaemenid Empire in the conflicts with Greek world of Mediterranean, to fall of Persia. Consideration of mutual constructions of other in antiquity, Near Eastern versus Greek testimony, and art and archaelogical evidence of these two civilizations. P/NP or letter grading.

78. Science and Religion from Copernicus to Darwinism. (5) Seminar, three hours. Designed for College Honors students. Relationship of science and religion in West by focusing on leading scientists such as Galileo, Newton, and Darwin. Each one dealt differently with competing demands of religion, based on faith and revelation, and science founded on experience and reason. Religion was and is constant one. P/NP or letter grading.

79. Personal Financial Health: Theory and Practice. (6) Seminar, three hours; fieldwork, four hours. Designed for College Honors students. Special emphasis on or mathematics preparation not required. Theory and practice of managing financial health, allowing for broad discussion of larger theoretical picture of variables affecting economy and practical hands-on advice for handling debt. Examination of family budgeting, debt, insurance, investing, and purchasing. Examination of variety of financial issues through three principal standpoints: psychology of finance, historical perspective of finance, and socioeconomic perspective of finance. P/NP or letter grading.

80. Cossacks and Narratives about Them. (5) Seminar, four hours. Designed for College Honors students. Examination of two Cossack societies: Ukrainian (Zaporozhian) Cossacks and Russian (Don) Cossacks. Both emerged in 15th and 16th centuries as warrior societies along contact zone between Slavic world and Muslin Tatar and Turkic world. Their frontier status and liminal culture proved to be mythogenic, and Cossacks figure prominently in imagination of literatures, especially in folklore, literature, film, and opera. Study of Cossacks through these media to understand not just Cossack society but ways in which Cossacks have been represented through language Polish, Russian, Ukrainian, Jewish, Ottoman, and west European culture. P/NP or letter grading.

82. Community and Labor Development from Gromyko to Putin. (4) Lecture, three hours; discussion, one hour. Introduction to practical applications of community development and outreach efforts in Los Angeles area, with projects from Community Outreach Partnership, views of local political and social development and outreach efforts in Los Angeles area, where projects from Community Outreach Partnership, views of local political and social development. P/NP or letter grading.

83W. Politics and Rhetoric of Literature. (6) Seminar, four hours; writing laboratory, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Examination of relationship among politics, rhetoric, and literature in study of literature from classical times to the present, broadening into general discussions of development of political discourse, particularly conflict between self and state, between ideology and the practical business of living. Satisfies Writing II requirement. Letter grading.

84. Conflicts between Languages. (5) Seminar, three hours. Examination of potentially conflict-ridden language situations in three countries abroad and discussion of various aspects of minority languages in the U.S. P/NP or letter grading.

85. Biological Clock. (5) Seminar, four hours. Designed for College Honors students, but open to all majors. Rotation of Earth imposed diurnal oscillations of physical changes on all living organisms on Earth. Predicting clocks, biological clock, allow organisms to anticipate and adapt to daily environmental changes, and knowledge of it comes from molecular biology, biochemistry, cell biology, genetics, and genomics. Study of these processes and interdisciplinary methodologies to understand how biological clock works and how it affects health and well-being. P/NP or letter grading.

86. Psychology of Fear. (5) Seminar, three hours; fieldwork, one hour. Examination of phobias, including inquiry into how people are distressed by intense fear, examination of structures and processes of irrational fears, and discussion of courage and fear reduction strategies. P/NP or letter grading.


90. Hollywood and Global Responsibility. (5) Seminar, five hours. Designed for College Honors students. American filmmakers have enormous power to reach global audiences. When they use this platform to make films that flout social norms still respected in most parts of world, objections arise. Where is line between free speech and free artistic expression and social responsibility? How can Hollywood become more globally responsible given its business realities and lack of governmental oversight? Study of different case studies affecting different countries and cultures to illuminate discourse on ethics and art. P/NP or letter grading.

Upper-Division Courses

101A. Student Research Forum. (2) Lecture, two hours. Designed to promote deep engagement in university research, including instruction on securing research opportunities, skills necessary for research and professional success, exploring research internships on and off campus, and communication of research. P/NP grading.

101B. UCLA Undergraduate Science Journal. (2) Seminar, two hours. For students on editorial board of annual UCLA Undergraduate Science Journal, including study of writing in sciences and honing of editing and production skills. May be repeated for maximum of 10 units. P/NP grading.

101C. UCLA Undergraduate Journal for Humanities and Social Sciences. (2) Seminar, two hours. For students on editorial board of annual Aleph journal of undergraduate research and writing, including study of writing in various disciplines and honing of editing and production skills. May be repeated for maximum of 10 units. P/NP grading.

101D. Counseling Multicultural Communities. (2) Seminar, two hours. Study of issues of culture and identity in cross-cultural counseling, including development of counseling skills. P/NP grading.

101E. Leading Undergraduate Seminars. (1) Seminar, one hour. Limited to students who have been accepted into College Honors Undergraduate Seminar Program. seminar, one hour. Leading seminars is a unique opportunity to develop skills to become effective student facilitators. Practical teaching strategies and techniques, as well as pedagogical and technological issues confronted by new instructors. Discussion of key topics, followed by discussion of syllabi that students are developing for their seminars and opportunities for feedback. P/NP grading.

101F. Integrity in Research. (2) Seminar, two hours. For students in CAPS, HHMI, MARC, and UC Udall programs. Discussion about integrity in research, current thinking in field, and important ethical issues that impact scientific investigation. P/NP grading.

101G. Graduate School Preparation. (2) Seminar, two hours. Limited to AAP students. Designed to help AAP students familiarize themselves with academic disciplines they would like to pursue in graduate school. Through course readings, guest speakers, and interactive assignments, students learn more about their graduate school options and how to navigate application process. P/NP grading.

103. Scientific Knowledge, Industrial Growth, and Social Strategies. (2) Lecture, two hours; activity, two hours. Introduction to research process in digital age, offering opportunity to develop research skills through exploration of libraries and Internet resources. Study of rare and unique materials, experimentation with digital tools, engagement with librarians and other experts, and interactive creation of research project proposal. Designed to prepare students for capstone or thesis experience in humanities or social sciences. P/NP grading.

101J. Mellon Mays Research Seminar. (2) Seminar, two hours. Limited to current Mellon Mays Undergraduate Fellows and designed to support them in their current research projects and graduate school preparation. Topics include research methods, abstracts, presentations, and posters, as well as graduate school application materials. May be repeated for maximum of 10 units. P/NP grading.

M102. Culture, Media, and Los Angeles. (6) (Same as African American Studies M102 and Asian American Studies M160.) Lecture, four hours; screenings, two hours. Designed for juniors/seniors. Role of media in society and its influence on contemporary cultural environment, specifically in Los Angeles; issues of representation as they pertain to race, ethnicity, gender, and sexuality. P/NP or letter grading.

103. Scientific Knowledge, Industrial Growth, and Social Policy. (5) Lecture, three hours; laboratory, two hours. Examination, using nanotechnology, of benefits and risks to society when new technologies are in process of development. P/NP or letter grading.
104. Fundamental Forms of Social Relationships from Theory to Research Design. (5) Seminar, three hours. Relational models theory posits that four elementary models organize social coordination, emotions, motives, and norms in virtually all domains and cultures. Study and critique of theory, development of research questions, planning of study, design of its methodology, and writing of research proposal. P/NP or letter grading.

105. Racial and Ethnic Disparities in Healthcare. (5) Seminar, three hours. Examination of ways in which race and ethnicity impact delivery of healthcare in U.S. and discussion of policies and proposals to address racial and ethnic disparities in healthcare professionals. P/NP or letter grading.

M106. Imaginary Women. (5) Same as Gender Studies M106.) Seminar, four hours. Designed for junior/senior College Honors students. Study of four female cultural archetypes—abscending wife/mother, infanticide mother, intellectual woman, and warrior woman—as they appear in their classical and modern manifestations in European and American cultures. P/NP or letter grading.

107. Literature and Political Order: Homer, Shakespeare, Dostoevsky. (5) Seminar, three hours. Designed for College Honors students. Examination of political order and questions of violence, power, leadership, and authority through close reading of literary texts, specifically Iliad by Homer, Julius Caesar and Henry IV, Part 1 by Shakespeare, and Brothers Karamazov by Dostoevsky. P/NP or letter grading.


M109. Foreign Exchange Market and Exchange Rate Forecasting. (5) (Same as Economics M123.) Seminar, four hours. Introduction to forecasting of exchange rates, with emphasis on the day-to-day use of econometric methods through use of powerful computer platform called Tradestation® in computer laboratory. Analysis of how foreign exchange market works, what financial instruments are used in this market, and the main theoretical determinants of exchange rates are. Generation of exchange rate forecasts by combining theo- retical concepts with real-world data using concepts and techniques from computer science, linguistics, and statistics. How to write simple codes to generate exchange rate forecasts and to evaluate accuracy of student forecasts. P/NP or letter grading.

110. Marxist and Post-Marxist Approaches to Cultural Studies. (5) Seminar, four hours. Examination of Marxist and post-Marxist approaches to study of culture, including classic texts, theoretical and empirical works, and the Marxist roots of postmodernism. P/NP or letter grading.

111. Stress and Coping. (4) Seminar, four hours. Ex- amination of research and theory on stress and coping, with emphasis on physical and mental conse- quences, strategies and moderators of both social sup- port and personality in coping strategies. P/NP or letter grading.

M112. Inner and Outer Worlds of Children: Social Policies, (4) (Same as Education M112.) Seminar, four hours. Prerequisites: Analysis of social policies impacting on children. Topics include assessment, social justice and geographical space, temporal ori- entation, and classical theories of adolescent develop- ment. Letter grading.

113. Hyperconnected World: Society and Internet. (5) Seminar, three hours. Designed for College Honors students. Exploration of social, political, economic, psychological, and cultural dimensions of our hyper- connected world via Internet. Topics include transfor- mations of social relationships online, physical versus real communities, identity and its creations, trust and deception, politics and social media, surveillance and privacy, economics, intellectual property, culture, educa- tion, and knowledge, and digital wellness. P/NP or letter grading.

114. Architecture from Los Angeles: Work of Frank Gehry, Thom Mayne, and Greg Lynn. (5) Seminar, three hours. Study and critique of theory, development of architectural work originating in Los Angeles, but reaching world both in material construction and aesthetic influence has emerged. Study of works of three seminal archi- tects—Frank Gehry, Thom Mayne, and Greg Lynn. Site visits and hands-on practice in how to read archi- tectural plans and how to use computers and mod- eling in architectural study and design. P/NP or letter grading.

115. Poetry and Society in England, 1588 to 1688: Verse, Politics, Religion, and Sexuality from Span- ish Armada to Glorious Revolution. (5) Seminar, three hours. Designed for College Honors students. Poetry in English literature 1588 to 1688, through prism of evolving political, philosophical, theological, sexual, economic, and scientific practices of that day and vice versa to understand poetry in cul- tural historical context. Students varnish versus of subjects from alchemy to zoology and be- come class resource on some relevant topic such as Renaissance medicine, Calvinism, Scholasticism, Cromwell and New Model Army, Elizabethan foreign policy, Stuart architecture, artistic and dietary changes, and printing and publishing conventions. P/NP or letter grading.

M116. Art Alive: Art and Improvisation in Museums. (4) (Same as Theater M187.) Seminar, four hours. Offered in collaboration with Los Angeles County Museum of Art (LACMA). Interpretation of art in collection through acting, dialogues, movement, and music. Research into history and art history and production of creative performance piece required. P/NP or letter grading.

117. London and Culture of Male Homosexuality, 1870 to 1900. (5) Seminar, four hours. Designed for College Honors students. Examination of male homo- sexual subculture that thrived in London during period when brilliant Irish writer Oscar Wilde (1854 to 1900) was sent to jail for committing acts of gross inde- cency. Study of Wilde trials, cultural consequences of Labouchere Amendment criminalizing male homo- sexual acts, some of Wilde’s writings, and exciting new writings. Focus on right offering insights into links that gay men in London had with theatrical world, prostitution, aristocrats, and underground pub- lishing. P/NP or letter grading.


119. Hollywood and Cultural Diversity in America. (5) Seminar, three hours. Designed for College Honors students. Hollywood filmmakers often produce movies where characters confront societal issues such as race, gender, and religion. P/NP or letter grading.

M120. Art and Performance: Interdisciplinary Ap- proach to Collections of Getty Center. (4) (Same as Theater M109.) Lecture, four hours; discussion, one hour. Drawing from objects in five major collections at Getty Museum, focus on five parallel historical per-iods in which political, social, and aesthetic philos- ophy of age is examined in musical and dramatic per- formance. Letter grading.

121. Psychoanalysis before Freud, and a Little Af- ter. (5) Lecture, three hours; discussion, one hour. Examination of different conceptions of the psyche and psychoanalysis, and how they have develop- ed and changed over the last century. P/NP or letter grading.

122. Chemical Communication across Tree of Life. (5) Seminar, three hours; discussion, two hours. De- signed for College Honors students. Chemical commu- nication governs relationships among most biolog- ical entities, across entire tree of life from viruses to Homo sapiens. Bioinspired devices are using knowl- edge gleaned from chemosensory systems to change surface of robotics, with wide applications in consumer industries such as homeland security. P/NP or letter grading.


124. Midwives, Mothers, and Medicine: Perspec- tives on History of Childbirth. (4) (Same as Theatre M127.) Seminar, three hours. Using examples from history and anthro- pology, examination of variety of practices associated with childbirth over time and across cultures, ad- dressing such themes as shifting relations among birthing women, midwives, and medical men and cul- tural meanings of birth. P/NP or letter grading.

125. Communities and Nations in Conflict: Theory and Practice of International Resolution. (5) Lecture, three hours; discussion, one hour. Intro- duction to theory and practice of conflict resolution, with emphasis on international conflict. Transitional justice and international tribunals, special courts, international Criminal Court to indigenous approaches such as community justice systems. Examination of environmental conflict reso- lution, homeland security and terrorism, role of gender in conflict, and role of media in conflict. P/NP or letter grading.

126. Waves of Resistance: Race, Empire, and So- cial Justice in Asia and Pacific Islands, (5) Seminar, three hours. Designed for College Honors stu- dents. Examination of historical and contemporary moments of racial violence, empire, and social justice in Asia and Pacific Islands. Global forces such as cap- italism, colonialism, and globalization played signifi- cant role in cultural, economic, and political organiza- tion of places such as American Samoa, Guam, Hawai‘i, Marshall Islands, Philippines, Okinawa, and South Korea. Exploration of how various groups of people have responded to these forces to have better understanding of how race, empire, and social justice have connected these distant and diverse areas and provided examples for struggle. P/NP or letter grading.

127. Citizenship, Leadership, and Service. (4) Seminar, three hours; fieldwork, three hours. Interactive participatory study of interactions between citizen- ship and leadership, and the ways in which critical theor- etical work in classroom and practical work in service organizations in the field. P/NP or letter grading.
128. What We Do When We Laugh Together: Humanistic, Social Scientific, and Biological Perspectives. (5) Seminar, four hours. Designed for College Honors students. Application of venerable humanist insights and social scientific thinking to contemporary and historical examples of humor. "Successful" laughter will be analyzed in terms of functional, evolutionary, and cultural perspectives. The seminar focuses on humor as a social phenomenon that helps individuals and groups to function in the world.

129. Poetry and Society in England, 1588 to 1688. (5) Seminar, four hours. Reading and discussion of poems to comprehend meaning and place in configurations of rapidly transforming society. Tensions and changes in that culture, and lives of authors, these works helped negotiate. How and why metaphysical and cavalier modes emerge in period of intense struggle. Interplay of form, content, and meaning within these modes. Evidence offered about personal psychological, gender politics, and status consciousness of this period and its poets, especially Donne, Herbert, Jonson, Carew, and Marvell. What kind of word were the poems designed for, and how well, were they doing it? And, what kinds of work should we do on them now? P/NP or letter grading.

130. Art, Entertainment, and Social Change. (5) Seminar, three hours. Integrative evaluation of evolving impact of arts and entertainment industry on various aspects of society, including politics, self-concept, and experience of everyday life, among others. P/NP or letter grading.

131. Global Dimensions of Education and Inequality (5) Seminar, three hours. Examination of role that education plays in maintaining and perpetuating poverty and inequality. Examination of how various reform strategies that have been proposed to spur development of human capital and local development are impacting poor countries and poor people who reside in rich. Examination of how different countries have used education to promote social equality and development and analysis of why some countries appear to be making more progress than others. Consideration of how factors such as history, particularly related to colonialism, political economy, and culture affect character and performance of schools. P/NP or letter grading.

132. New Women and Activism from America to Asia. (5) Seminar, three hours. Designed for College Honors students. Spanning of academic disciplines and regional boundaries by looking at women's movements in 19th and 20th centuries in Asial and East Asia in early 19th century, with examination of how issues of women's rights, labor rights, and race/nation identities united and divided women across classes and national borders. Consideration of how movements in New York and parallel movements in East Asia (Japan, Korea, China) that adopted and adapted some of these same ideas to their own unique historical circumstances. Past historical role-playing game titled Greenwich Village, 1913: Suffrage, Labor, and New Woman. P/NP or letter grading.

133. Practice and Ethics of Ethnographic Fieldwork. (5) Seminar, three hours. Examination of ethics and practices of ethnographic fieldwork. This is not field methods course but one intended to convey rich knowledge fieldwork can produce in many disciplines and kinds of research. Issues raised in doing fieldwork. P/NP or letter grading.

134. Democracy and Utopias. (5) Seminar, three hours. Designed for College Honors students. Political culture of modern democracy fosters idea of progress and constant form and is also way of radical upheavals. Political culture of ancient Greek democracy made possible two things: awareness of having achieved unmatched superiority over any other political ideas and birth of utopia. Democracy praised itself as perfect form of government, but it also nourished counterfactual objections to neglect for absolute, just, and blissful political order. Examination of this paradoxical life-world in a political system and tracing its history in works of Aristophanes, Plato, Thomas More, Tommaso Campanella, Francis Bacon, and Charles Fourier to show relevance to contemporary politics. P/NP or letter grading.

135.荣和 Poetics and Society in England, 1588 to 1688. (5) Seminar, four hours. Reading and discussion of poems to comprehend meaning and place in configurations of rapidly transforming society. Tensions and changes in that culture, and lives of authors, these works helped negotiate. How and why metaphysical and cavalier modes emerge in period of intense struggle. Interplay of form, content, and meaning within these modes. Evidence offered about personal psychological, gender politics, and status consciousness of this period and its poets, especially Donne, Herbert, Jonson, Carew, and Marvell. What kind of word were the poems designed for, and how well, were they doing it? And, what kinds of work should we do on them now? P/NP or letter grading.


137. What We Do When We Laugh Together: Humanistic, Social Scientific, and Biological Perspectives. (5) Seminar, four hours. Designed for College Honors students. Application of venerable humanist insights and social scientific thinking to contemporary and historical examples of humor. "Successful" laughter will be analyzed in terms of functional, evolutionary, and cultural perspectives. The seminar focuses on humor as a social phenomenon that helps individuals and groups to function in the world.


139. Confucius and His Legacies. (5) Seminar, four hours. Examination of Confucian Tradition, from Warring States to modern. Consideration of how Confucius is often cited as a philosopher who argues that extra scientific passion, financial incentives, and innovation are required for freedom and what is required for responsibility. Consideration of how teachings of Confucius and other philosophers have been adapted to modern problems.

140. Dominants and Subordinates in Social Psychology of Privilege and Oppression in Public Education. (6) Lecture, four hours; discussion, one hour; tutoring, three hours. Study of social arrangements and temporary inequalities in contemporary American public school, showing how such social inequalities tend to become permanent. Field component included. P/NP or letter grading.


142. Free Will and Moral Responsibility: From Neuroscience to Philosophy and Back. (5) Seminar, four hours. Survey of motivations, methods, and conclusions of neuroscientific and psychological investigations of free will. Consideration of neuroscientific arguments that humans are not free when they choose and of philosophical arguments about what is required for freedom and what is required for responsibility. Consideration of whether philosophical investigations of free will inform neuroscience and whether and how experiments could be designed and carried out to better correspond with philosophical and legal debate on free will. P/NP or letter grading.

143. Latino Immigration History and Politics. (4) (Same as Chicana and Chicano Studies M124.) Lecture, four hours. Overview of the 20th century, examining social, political, and economic contexts of different waves of Latin American immigration to the U.S. has occurred. Letter grading.

144. International Development: Using Your Major For Peace and Development. 3 hours. The adoption of the United Nations’ Sustainable Development Goals (2015) called for addressing extreme poverty, disease, environmental degradation, gender disparities, unemployment, and other problems affecting people across the globe. Sustainability entails development solutions that endure and engage local people. The aim is to leverage local capacities to improve living conditions consistently. Students will address questions such as: How does your major relate to one or more of the goals? Which goal speaks to your interest? What kind of passion or do you have that can contribute to addressing one or more of the goals? P/NP or letter grading.


146. Imagining Global Climate Change. (5) Seminar, three hours. Designed for College Honors students. Global and comparative study of regions in front line of climate change, such as tropical islands and poles that visibly confront sea level rise and glacial melt, through study of visual arts, literature, and film. Study of authors and artists from U.S., Australia, New Zealand, Guyana, Mexico, and Maldives to examine threat of climate change in its complex cultural imaginations. P/NP or letter grading.

147. The Anthropocene: An Archaeological Perspective. (5) Seminar, four hours. Examination of new geological period, informally labeled the Anthropocene, in which environment is profoundly impacted by human activities. Evidence that anthropogenic forces have affected conditions on Earth during past two centuries, including loss of living space for the postcolonial, diaspora, ethnic, and area studies? What manifestations of empire, diasporic mobility, and postcolonial short fiction question literary conventions of all? Close reading of short stories in comparative form with creative non-fiction and hybrid narrative forms in works by Aimé Céaire, Aimaitavarra, Jumpha Lahiri, ZZ Packer, Roxane Gay, and Claire Vaye Watkins. P/NP or letter grading.


151. Past People and Their Lessons for Our Own Future. (5) (Same as Anthropology M148 and Geography M153.) Lecture, two hours; discussion, two hours. Examination of modern and past people that met varying fates, as background to examination of how other modern people are coping or failing to cope with similar issues. Letter grading.

154. Interpreting Performance: Examination of Social, Historical, and Cultural Models for Performance. (5) (Same as Theater M112.) Lecture, two hours; discussion, two hours. Examination of nature of performance in theory and practice and of social, historical, and cultural contexts in which performance traditions have evolved. Attendance at approximately five designated performances/events required. P/NP or letter grading.

156. Political Opposition in Early Modern Europe. (5) Seminar, three hours. Designed for College Honors students. Examination of the role of political movements from Italian Renaissance to French Revolution. Topics include Machiavelli’s contributions to political thought, turmoil of 16th-century France and Dutch Republic, and their radical underside of Protestant thought, French Wars of Religion, Dutch revolt against Spanish, English Civil Wars, and radical thought of European Enlightenment and its contributions to French Revolution. P/NP or letter grading.
157. International Relations of Middle East. (4) Same as Political Science M132B. Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Role of great powers in Middle East, with emphasis on American, Soviet, and West European policies since 1945. P/NP or letter grading.


166. Stories of Cultural Distance and Impeded Asimulation. (5) Seminar, four hours. Study of how fiction, memoir, and film have represented involuntary cross-cultural assimilation as seen from perspective of intimate others, usually family members, coming to terms with their own and their relatives’ cultural identity. P/NP or letter grading.

168. Paris: Biography of City from 1715 to World War II. (5) Seminar, three hours. Designed for College Honors students. Exploration of history of Paris from death of Louis XIV to end of World War II. Study of causes and consequences of rapid urbanization and reasons why Paris became fulcrum for political revolutions. Examination of Paris as locus of modernism, its rebuilding and design under Baron George Haussmann, impact of World War I and expat culture, and city’s housing crisis, P/NP or letter grading.

169. Imposture and National Identity. (5) Seminar, three hours. Cross-cultural approach to study of imposture (assumption of false identity) as window through which to examine cultural modernity and national identity. Study of literature, history, and film from 17th century to the present, the U.S., Near East, and South Asia as way of trying to define both hypocrisies and creativity of imposture. P/NP or letter grading.


171. Rationality and Emotions. (5) Seminar, three hours. Historical study of way in which philosophers, social theorists, and cognitive scientists have characterized relationship between rationality and emotions. Examining in emerging consensus that emotions can potentially underpin rationality. Readings range from philosophy of ancient Greeks to writings of contemporary neuroscientists. P/NP or letter grading.

172. French Thinkers of Society. (5) Seminar, four hours. In-depth study of distinguishing perspectives of French theorists who wrote on society and its impact on individuals. Theorists include Pascal, Rousseau, Durkheim, and Emile Durkheim from 18th to modern period, contemporary thinkers such as Michel Foucault, Michel de Certeau, and Pierre Bourdieu, and two postmodern theorists, Guy Debord and Jean Baudrillard. P/NP or letter grading.

173. American Political Thought from Revolution to Civil War. (5) Seminar, three hours. Exploration of nature of American political thought between Revolution and Civil War. Topics include nature of rights, federalism, constitutionalism, and democracy, as well as morality of slavery and legitimacy of succession. P/NP or letter grading.

173A. Liberty, Government, and Society in Europe: an Thought. (5) Seminar, three hours. Examination of great works of European thought from 17th through 18th century, including works of John Locke, Montesquieu, David Hume, Edmund Burke, and Thomas Payne, with emphasis on legal, social, and moral preconditions to human political action. P/NP grading.


174. Future Impact of Nano in New Technologies. (5) Seminar, four hours. Examination, for general audience, of science behind nanotechnology and way in which nano can potentially influence medical care, environment, energy issues, military, government, and economics. Demonstration of how nano, like current technologies, can be separated from ethical, cultural, political, and social issues. P/NP or letter grading.


176A. Context of Arab World: Cairo and Alexandria. (4) Seminar, four hours; fieldwork, eight hours. Enforced corequisite: course 176B. Introduction to some of most important cultural, historical, and political currents in contemporary Arab world, with special focus on Cairo and Alexandria. Offered in summer only. P/NP or letter grading.

176B. Reading Arab World: Cairo and Alexandria. (4) Seminar, four hours; fieldwork, eight hours. Enforced corequisite: course 176A. Introduction to some of most salient literature in contemporary Arab world, with focus on Cairo and Alexandria. Offered in summer only. P/NP or letter grading.

177. Biotechnology and Art. (5) Seminar, six hours. Bioartists use cells, DNA molecules, proteins, and living tissues to bring to life ethical, social, and aesthetic issues of sciences. Study of how biotic blurs distinctions between science and art through combination of artistic and scientific processes, creating wide public debate. Exploration of history of biotechnology as well as implications of this science. P/NP or letter grading.

178. Secret Coups, Imperial Wars, and American Democracy since World War II. (5) Seminar, three hours. Study of U.S. involvement, both covert and overt, in exponential wars since World War II, including involvement in Vietnam, Korea, Cuba, Iran, Grenada, Nicaragua, and Chile. Implication of these actions for vitality of American democracy. P/NP or letter grading.


M180. Structure, Patterns, and Polyhedra. (5) Same as Chemistry M117. Seminar, four hours; lecture, four activity, two hours. Exploration of structures and their geometric underpinnings, with examples and applications from architecture (space frames, domes), biopolymer chemistry, and molecular cage models. P/NP or letter grading.

182. From Scientific Revolution to Industrial Revolution. (5) Seminar, four hours. Designed for College Honors students. Examination of most important developments in making of Western power and hegemony: rise of new science and its relationship first to British, then European, Industrial Revolution. Once seen as product of material factors such as abundant coal, high wages, and available labor, Industrial Revolution is shown as also possessing critically important knowledge of components, one scientific culture derived from Newtonian science and mechanics. P/NP or letter grading.

183. Being Human: Identity in Age of Genomics and Neuroscience. (5) Seminar, three hours. Designed for College Honors students. Identity looked at through complex interplay of identity, consciousness, and philosophy, including exploration of current debates about race and IQ, sex, disability, and intelligence itself. Examination of way in which philosophers, anthropologists, psychologists, and biologists have sought to look at human nature to look for ethical guides about what genetic and neurobiological technologies to pursue or avoid. P/NP or letter grading.


193A. Journal Club Seminars. (2) Seminar, two hours; discussion, two hours. Study of key research journals and important research articles. Presentations by program faculty members and other leading researchers. May be repeated for credit. P/NP grading.

193B. Journal Club Seminars: Arts and Humanities Summer Research Program. (2) Seminar, one hour; discussion, one hour. Open to students selected for Arts and Humanities Summer Research Program. Study of humanities research journals and monographs. Weekly student research reports and presentations by humanities faculty members. May be repeated for credit. P/NP grading.

193C. Journal Club Seminars: Mellon Mays Undergraduate Research Scholars. (2) Seminar, one hour; discussion, one hour. Limited to students selected for Mellon Mays Undergraduate Research Scholars. Study journals and important research articles in arts, humanities, and social sciences. Weekly research reports and presentations by Mellon Mays students. Presentations by program faculty members and other leading researchers. P/NP grading.

199. Directed Honors Studies. (4) Tutorial, two hours. Preparation: minimum of 4 units completed in Honors Collegium with grade of B or better, overall
HUMAN GENETICS
David Geffen School of Medicine
6506 Gonda Center
Box 957088
Los Angeles, CA 90095-7088
310-794-5423
humgen@mednet.ucla.edu
http://www.genetics.ucla.edu

Leonid Kruglyak, PhD, Interim Chair

Professors
Rita M. Cantor, PhD, in Residence
Esteban C. Dell’Angelica, PhD
Eleazar Eskini, PhD
Guoping Fan, PhD
Jonathan Flint, MD, in Residence
Nelson B. Freimer, MD
Michael B. Gorin, MD, PhD
Nelson B. Freimer, MD
in Residence
Karen Reue, PhD
Joseph Pisegna, MD
Matteo Pellegrini, PhD
in Residence
Christina G.S. Palmer, PhD,
Kenneth L. Lange, PhD
Michael B. Gorin, MD, PhD
in Residence
Eleazar Eskin, PhD

Professors Emeriti
Roel A. Ophoff, PhD, in Residence
Deborah Krakow, MD,
Wayne W. Grody, MD, PhD
Interim Chair

Adjunct Associate Professor
Katrina M. Dipple, MD, PhD
Sriram Sankararaman, PhD

Associate Professors
Brent L. Fogel, MD, PhD, in Residence
Julian A. Martinez, MD, PhD

Assistant Professors
Jingyi Jessica Li, PhD
Kirk E. Lohmueller, PhD
Bogdan Pasaniuc, PhD

Adjunct Professors
Katrina M. Dipple, MD, PhD
Jeanette C. Papp, PhD

Adjunct Associate Professor
Emmanuelle C. Delot, PhD

Scope and Objectives
The goal of the graduate program is to train the next generation of leaders in human genetics. This broad and rapidly evolving field of research incorporates multiple areas of modern experimental biology (including but not limited to molecular and behavioral genetics, epigenetics, biochemistry, cell and developmental biology, imaging, and large-scale omics approaches such as genomics, transcriptomics, and functional genomics) and of computational biology (including bioinformatics and biostatistics). In their research, students tackle Mendelian diseases and genetically complex traits of key relevance to human health.

A wide variety of courses is offered to equip future independent researchers with fundamental knowledge about state-of-the-art methods for generating experimental data on a genome-wide scale and computational and statistical approaches to draw from the data sound conclusions of biological and medical significance. In addition, courses on medical and ethical issues provide students with a societal perspective on human genetics.

The program offers the MS and PhD degrees; graduate study leading to a PhD degree is emphasized. Under special circumstances, and only after consultation with and approval by the Department of Human Genetics, individuals may apply for admission to the MS program.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of Human Genetics offers Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Human Genetics. An MD/PhD program is also offered.

Human Genetics
Upper-Division Courses
CM124. Computational Genetics. (4) (Same as Computer Science CM124.) Lecture, four hours; discussion, two hours outside study, six hours. Enforced prerequisites: Computer Science 32 or Program in Computing 10C with grade of C– or better, and one course from Biostatistics 100A, 110A, Civil Engineering 110, Electrical Engineering 131A, Mathematics 170A, or Statistics 100A. Designed for engineering students as well as students from biological sciences and medical school. Introduction to computational analysis of genetic variation and computational interdisciplinary research in genetics. Topics include introduction to genetic sequencing, identification of genes involved in disease, inferring human population history, technologies for obtaining genetic information, and genetic sequencing. Focus on formulation of interdisciplinary problems as computational problems and then solving those problems using computational techniques from statistics and computer science. Concurrently scheduled with course CM224. Letter grading.

CM136C. Societal and Medical Issues in Human Genetics. (5) (Same as Society and Genetics M102.) Lecture, three hours; discussion, two hours. Sequence of entire human genome is now known. Consideration of how this knowledge impacts concepts of ourselves as individuals and of our place in biological universe, concepts of race/ethnicity and gender, and ability of DNA-based forensics to identify specific individuals, ownership and commodification of genes, issues of privacy and confidentiality, issues of genetic discrimination, issues of predictive genetic testing, discussion of human cloning for reproductive and therapeutic purposes. Exposure to medical genetics cases. Discussion of role of whole genome sequencing in clinical setting. Human Genome Project influence on medicine and on our concepts of self and identity. Concurrently scheduled with course C236C. Letter grading.

C144. Genomic Technologie, (4) Lecture, three hours; discussion, one hour. Prerequisite: Life Sciences 4. Survey of key technologies that have led to successful application of genomics to biology, with focus on theory behind specific genome-wide technologies and their current applications. Concurrently scheduled with course C244. P/NP or letter grading.

199. Special Studies in Human Genetics. (2 to 8) Tutorial, to be arranged. Students select instructor among eligible research faculty and carry out independent research project under instructor supervision. P/NP or letter grading.

Graduate Courses
M203. Stochastic Models in Biology. (4) (Same as Biomathematics M203.) Lecture, four hours. Prerequisite: Mathematics 170A or equivalent experience in probability. Mathematical description of biological relationships, with particular attention to areas where conditions for deterministic models are inadequate. Examples of stochastic models from genetics, physiology, ecology, and variety of other biological and medical disciplines. S/U or letter grading.

M207A. Theoretical Genetic Model (4) (Same as Biomathematics M207A and Biostatistics M272.) Lecture, three hours; discussion, one hour. Prerequisites: Mathematics 115A, 131A, Statistics 100B. Mathematical models in statistical genetics. Topics include population genetics, genetic epidemiology, gene mapping, design of genetic experiments, DNA sequence analysis, and molecular phylogeny. S/U or letter grading.

M207B. Applied Genetic Modeling. (4) (Same as Biomathematics M207B and Biostatistics M237.) Lecture, three hours; laboratory, one hour. Methods of computer-oriented human genetic analysis. Topics include statistical methodology underlying genetic analysis of both quantitative and qualitative complex traits. Laboratory for hands-on computer analysis of genetic data; laboratory reports required. Course complements M207A; students may take either and are encouraged to take both. S/U or letter grading.

210. Topics in Genomics. (2) Seminar, two hours. Survey of current biological theory and technology used in genomic research. Topics include genomics technologies, functional genomics, proteomics, statistical genetics, bioinformatics, and ethical issues in human genetics. S/U grading.

M211. Mathematical and Statistical Phylogenetics. (4) (Same as Biomathematics M211 and Biostatistics M272.) Lecture, three hours; laboratory, one hour. Theoretical models in molecular evolution, with focus on phylogenetic techniques. Topics include evolutionary tree reconstruction methods, studies of viral evolution, phylogeography, and coalescent approaches. Examples from evolutionary biology and medicine. Laboratory for hands-on computer analysis of sequence data. S/U or letter grading.

CM224. Computational Genetics. (4) (Same as Bioinformatics M224 and Computer Science CM224.) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced prerequisites: Computer Science 32 or Program in Computing 10C with grade of C– or better, and one course from Biostatistics 100A, 110A, Civil Engineering 110, Electrical Engineering 131A, Mathematics 170A, or Statistics 100A. Designed for engineering students as well as students from biological sciences and medical school. Introduction to computational analysis of genetic variation and computational interdisciplinary research in genetics. Topics include introduction to genetic sequencing, identification of genes involved in disease, inferring human population history, technologies for obtaining genetic information, and genetic sequencing. Focus on formulation of interdisciplinary problems as computational problems and then solving those problems using computational techniques from statistics and computer science. Concurrently scheduled with course CM224. Letter grading.

Graduate Courses
computational techniques from statistics and computer science. Concurrently scheduled with course CM124. Letter grading.

M226. Machine Learning in Bioinformatics. (4) (Same as Bioinformatics M226 and Computer Science M226.) Lecture, four hours; outside study, eight hours; laboratory, four hours. Computer Science and Computer Science in Computing 10C with grade of C– or better. Recommended: one course from Biostatistics 100A, 110A, Civil Engineering 110, Electrical Engineering 131A, Mathematics 170A, or Statistics 100A. Familiarity with probability, statistics, linear algebra, and algorithms expected. Designed for engineering students from bioinformatics, computer science, and medical school. Biology has become data-intensive science. Bottleneck in being able to make sense of biological processes has shifted from data generation to statistical models and inference algorithms that can analyze these datasets. Statistical machine learning provides important toolkit in this endeavor. Biological datasets offer new challenges to field of machine learning. Examination of statistical and computational aspects of machine learning techniques and their application to key biological questions. Letter grading.

M229S. Seminar: Current Topics in Bioinformatics. (4) (Same as Bioinformatics M229S and Computer Science M229S.) Seminar, four hours; outside study, eight hours. Designed for graduate engineering students as well as students from biological sciences and related studies to current topics in bioinformatics, genomics, and computational ge- netics and preparation for computational interdisciplinary research in genetics and genomics. Topics include computational and regulatory genomics, association analysis, association study design, isolated and admixed populations, population structure, human structural variation, model organisms, and genomics. Computational techniques include those from statistics and computer science. May be repeated for credit with topic change. Letter grading.

M236A. Advanced Human Genetics A: Molecular Aspects. (4) Lecture, three hours. Recommended preparation: prior knowledge of basic concepts in molecular biology and genetics. Advanced topics in human genetics related to molecular genetics and rel- evant technologies. Topics include genomic technologies, human genome, mapping and identification of disease-causing mutations, transcriptomics, proteomics, functional genomics, epigenetics, and stem cells. May be repeated for credit with different emphasis. Other publications, and websites of the program are available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

M236B. Advanced Human Genetics B: Statistical Aspects. (4) Lecture, three hours; computer laboratory, one hour. Recommended preparation: introductory statistics knowledge equivalent to Biostatistics 100A or Statistics 13 and general genetics knowledge equivalent to Ecology and Evolutionary Biology 121, Human Genetics 236A, or Molecular, Cell, and Devel- opermental Biology 144. Statistical and population ge- netics related to analysis of complex human genetic traits. Reading materials include original research pa- pers and reviews. Letter grading.

C236C. Societal and Medical Issues in Human Ge- netics. (6) Lecture, three hours; discussion, two hours. Sequence of entire human genome is now known. Consideration of how this knowledge impacts concepts of ourselves as individuals and of our place in biological universe, concepts of race/ethnicity and gender, ability of DNA-based forensics to identify spe- cific individuals, ownership and commodification of genetic information, and confidential issues of genetic discrimination, issues of predictive genetic testing. Discussion of human cloning for reproductive and therapeutic purposes. Exposure to medical ge- netics cases. Discussion of role of whole genome se- quencing in clinical setting. Human Genome Project influence on medicine and on our concepts of self and identity. Concurrently scheduled with course CM115L. Letter grading.

C244. Genomic Technology. (4) Lecture, three hours; discussion, one hour. Requisite: Life Sciences 4. Survey of key technologies that have led to suc- cessful application of genomics to biology, with focus on theory behind specific genome-wide technologies and their current applications. Concurrently sched- uled with course C144. S/U or letter grading.


M255. Mapping and Mining Human Genome. (3) (Same as Pathology M255.) Lecture, three hours. Basic molecular genetic and cytogenetic techniques of gene mapping. Selected regions of human ge- nomic map scrutinized in detail, particularly gene families and clusters of genes that have remained linked from mouse to human. Discussion of localization of disease genes. S/U or letter grading.


M265. Computational Methods in Genomics. (4) (Same as Bioinformatics M265 and Computer Science M225S.) Lecture, two hours; outside study, eight hours; discussion, two and one half hours; discussion, two and one half hours; outside study, seven hours. Introduction to computational approaches in bioinformatics, genomics, and computational ge- netics and preparation for computational interdiscipli- nary research in genetics and genomics. Topics in- clude genome analysis, regulatory genomics, associ- ation analysis, association study design, isolated and admixed populations, population structure, human structural variation, model organisms, and genomics. Computational techniques include those from statistics and computer science. May be repeated for credit with different emphasis.

282. Human Genetics Seminar and Journal Club. (2) Seminar, one hour biweekly; discussion, one hour biweekly. Limited to graduate students. Participation and presentation in biweekly journal club meeting whose topics reflect those of talk in Human Genetics Seminar Series during following week. Club presentation required. S/U grading.

596. Directed Individual Study and Research. (2 to 12) Tutorial, to be arranged. Individual study or re- search for graduate students. May be repeated for credit. S/U grading.

597. Preparation for MS Comprehensive Examina- tion or PhD Qualifying Examinations. (2 to 12) Tu- torial, to be arranged. Individual study for MS com- prehensive examination or PhD qualifying examina- tions. May be repeated for credit. S/U grading.

598. MS Thesis Research and Writing. (2 to 12) Tu- torial, to be arranged. Preparation of research data and writing of MS thesis. May be repeated for credit. S/U grading.


INDO-EUROPEAN STUDIES

Interdepartmental Program
College of Letters and Science

100 Dodd Hall
Box 951417
Los Angeles, CA 90095-1417
310-825-4171
http://www.pies.ucla.edu

Brent H. Vine, PhD, Chair

Faculty Committee
Stephanie W. Jamison, PhD (Asian Languages and Cultures)
Joseph F. Nagy, PhD (English)
Christopher M. Stevens, PhD (Germanic Languages)
Brent H. Vine, PhD (Classics)

Scope and Objectives

The prime aim of the interdisciplinary Indo-Eu- ropean Studies Program is the integral study of Indo-European culture, based on comparative linguistics, archaeology, social structure, and religion. The PhD in Indo-European Studies is offered with two alternative major emphases: Indo-European linguistics and Indo-Iranian or other specialized language area studies.

Graduate Study

Official, specific degree requirements are de- tailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Indo-European Studies Program offers Candidate in Philosophy (CPhil) and Doctor of Philosophy (PhD) degrees in Indo-European Studies.

Indo-European Studies

Lower-Division Courses

M20. Visible Language: Study of Writing. (5) (Same as Asian M20, Near Eastern Languages M20, Slavic M20, and Southeast Asian M20.) Lecture, three hours; discussion, one hour. Consideration of concrete means of language representation in writing systems. Earliest representations of language known are those of Near East dating to end of 4th millennium B.C. While literate civilizations of Egypt, Indus Valley, China, and Mesoamerica left little evidence of corre- sponding earliest developments, their antiquity and, in case of China and Mesoamerica, their evident isola- tion mark these centers as loci of independent develop- ments in writing. Basic characteristics of early scripts, assessment of modern alphabetic writing sys- tems, and presentation of conceptual basis of semi- otic language representation. Origins and develop- ment of early non-Western writing systems. How Greek-Roman alphabet arose in 1st millennium B.C. and how it compares to other modern writing sys- tems. P/NP or letter grading.

M70. Origin of Language. (5) (Same as Communica- tions 70, Germanic Languages 70.) Lecture, three hours; dis- cussion, one hour. Theoretical and methodological is- sues surrounding origin of language. Topics include evolutionary theory, evolution of man, how language
Upper-Division Courses

131. European Archaeology, Neolithic to Bronze Age. (4) Lecture, four hours. Survey of European cultures from beginning of food-producing economy in 7th millennium B.C. to beginning of Bronze Age in 3rd millennium B.C. P/NP or letter grading.

132. European Archaeology: Bronze Age. (4) Requisite: course 131. Survey of European cultures from around 3000 B.C. to the period of destruction of the Mycenaean culture about 1200 B.C. Aegean area and rest of Europe.

140. Food in Language and Myth. (4) Lecture, three hours; discussion, one hour. Introduction to study of food in fields of linguistics and mythology. What is special about language used to talk about food, what is history of food words, and how does language impact and construct food? How do myths and narratives revolving around food function in different cultures? Students explore history of food words and learn how to analyze food myths. Students become aware of how language in food is manipulated and how to tell more effective stories about food. P/NP or letter grading.

M150. Introduction to Indo-European Linguistics. (8) (Same as Linguistics M150.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: Linguistics 1 or 20. Indo-European languages (ancient and modern), including their relationships, chief characteristics, writing systems, and sociolinguistic contexts; nature of reconstructed Indo-European proto-language and proto-culture. One or more Indo-European languages may be investigated in detail. P/NP or letter grading.

C160. Indo-European Comparative Mythology and Poetics. (4) Seminar, three hours. Preparation: familiarity with at least one ancient Indo-European language. Comparison of major Indo-European mythological and poetic traditions and reconstruction of their common sources. Topics include deities and their names; symbolic systems in social context; myths, folk narratives, belief systems; relations with other traditions; literary continuations of mythopoetic material. Concurrently scheduled with course C160. P/NP or letter grading.

M168. Introductory Hittite. (4) (Same as Ancient Near East M168.) Lecture, two hours; recitation, one hour. Recommended preparation: knowledge of language with case system. Introduction to Hittite grammar by series of graded lessons covering morphology and syntax, followed by readings of selected texts from variety of genres in this language. P/NP or letter grading.

199. Special Studies. (2 to 8) Tutorial, to be arranged. P/NP or letter grading.

Graduate Courses


222A-M222B. Vedic. (4-4) (Same as Iranian M222A-M222B and South Asian M222A-M222B.) Lecture, three hours. Preparation: knowledge of Sanskrit equivalent to South Asian 110C. Characteristics of Vedic dialect and readings in Rig-Vedic hymns. Only course M222B may be repeated for credit. S/U or letter grading.


250A-250B. European Archaeology. (4-4) Seminar, three hours. Studies in ancient European archaeological materials and their relationship to Near East, Western Siberia, and Central Asia. May be repeated for credit. In Progress (250A) and S/U or letter (250B) grading.

C260. Indo-European Comparative Mythology and Poetics. (4) Seminar, three hours. Preparation: ability to read original sources in at least one ancient Indo-European language. Comparison of major Indo-European mythological and poetic traditions and reconstruction of their common sources. Topics include deities and their names; symbolic systems in social context; myths, folk narratives, belief systems; relations with other traditions; literary continuations of mythopoetic material. Concurrently scheduled with course C160. S/U or letter grading.


375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.


597. Preparation for PhD Qualifying Examinations. (2 to 8) Tutorial, to be arranged. S/U grading.

Information Studies

Lower-Division Courses

10. Information and Power. (5) Lecture, five hours. Designed for undergraduate students. Introduction to core concepts of information and power and relations between them in range of social, economic, political, cultural, technological, and institutional contexts. Topics include information markets and economies; power of cultural and media institutions; state interests in information; information, conflict, and warfare; information organization, classification, and access; power and information technology infrastructure; and intellectual property regimes. Letter grading.

20. Digital Cultures and Societies. (5) Lecture, five hours. Designed for undergraduate students. Examination of social and cultural contexts of global spread of digital networks and systems. Exploration of ethical, infrastructural, and political questions raised at intersection of technologies and cultures. Topics include social media revolutions, indigenous and non-Western uses of technology, cross-cultural design, digital media literacies, and more. Letter grading.

30. Internet and Society. (5) Lecture, five hours. Designed for undergraduate students. Examination of information technology in society, including Internet, World Wide Web, search engines (e.g., Google, Yahoo), social systems, electronic publishing, and distribution of media, including newspapers, books, and music. Exploration of many of these technologies, social, cultural, and political context in which they exist, and how social relationships are changing. Letter grading.

97. Variable Topics in Information Studies. (4) Seminar, four hours. Designed for freshmen/sophomores, but open to all undergraduate students. Exploration of changing set of basic concepts and issues in study of information, information technology, and society and culture at introductory level. May be repeated for credit with consent of instructor. Letter grading.

Upper-Division Courses

139. Letterpress Laboratory. (1) Laboratory, one hour. Hands-on printing experience in letterpress shop designed to give students in information studies, design, or other disciplines understanding of printing process. Basic instruction provided, and students work on group project for duration of term. May be repeated twice. P/NP grading.

180. Special Topics in Information Studies. (4) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Selected topics or issues related to social, cultural, economic, or political aspects of information and information systems. Consult Schedule of Classes for topics and instructors. May be repeated once for credit with topic change. P/NP or letter grading.

199. Directed Research in Information Studies. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culling of paper or project grade. May be repeated for credit. Individual contract required. Letter grading.

Graduate Courses

200. Information in Society. (4) Lecture, two hours; discussion, two hours. Examination of processes by which information and knowledge are created, integrated, disseminated, organized, used, and preserved. Topics include history of communication technologies, evolution of literacy, development of information professions, and social issues related to information access. Letter grading.

201. Ethics, Diversity, and Change in Information Professions. (4) Lecture, two hours; discussion, two hours. Service learning course that serves as forum to which information and knowledge are created, integrated, disseminated, organized, used, and preserved. Topics include history of communication technologies, evolution of literacy, development of information professions, and social issues related to information access. Letter grading.

202. History of Books and Literacy Technologies. (4) Lecture, two hours; discussion, 90 minutes. Issues in history of books, writing, and literacy technologies. Investigation of evolution of literacy and basic concepts of literacy, earliest use of systematic notation systems in Mesopotamia, and current development of devices and practices that shape contemporary concepts of literacy. Examination of historical development of technology (tablets, scrolls, codices, illumination and illustration techniques, paper and manuscript production, photography, digital tools), institutions (libraries, printing and publishing industries), cultural issues and policies (publishing, censorship, colonialism, globalization), formats and styles (typography). Letter grading.

203. Seminar: Intellectual Freedom and Information Policy Issues. (4) Seminar, four hours. Investigation of concept of intellectual freedom, information policy issues, and intellectual property. Seminar is designed to foster exploration and understanding of intellectual freedom, information access, and other restraints on access to information. Letter grading.

204. Scholarly Communication and Publishing. (4) Lecture, three and one half hours. Designed for M.I.T. students, but open to all undergraduate students. Examination of scholarly communication system in disarray. It is no longer clear what it means to publish articles and books. Digital distribution is norm, whether peer-reviewed in journals or by blogs or social media. Scholarship is becoming more atomized in small units of research objects that can be combined in many ways. Open access publishing, now required by many funding agencies and universities, is eroding barriers between authors, readers, publishers, and libraries. Survey of evolving landscape of scholarly communication, providing introduction to publishing, technology, and policy issues such as open access, mass digitization, institutional repositories, computable publications, and altmetrics. Letter grading.


206. Introduction to Economics of Information. (4) Seminar, three and one half hours. Introduction to key concepts, scholars, and studies in economics of information, bibliometrics, seeking to understand information, and other restraints on access to information. Letter grading.

211. Artifacts and Cultures. (4) Lecture, four hours. Identification of key practices, social context of library services, and professional, community, and individual values, in- cluding exploration of impact of such values on professional practice, decision making, and public policy. Letter grading.

212. Values and Communities in Information Professions. (4) Lecture, two hours; discussion, two hours. Forum to discuss, understand, and critique value systems and power structures embedded in information and work in diverse societies. Exploration of importance of thinking locally, in design, evaluation, and engagement with information institutions and technologies, ranging from archives and libraries to Internet. Aspects of information so- cial shaping and agency, including professional, community, and individual values, including exploration of impact of such values on professional practice, decision making, and public policy. Letter grading.


227. Information Services in Culturally Diverse Communities. (4) Lecture, four hours. Issues in provision of information services in multicultural and multilingual society. Understanding role of information institutions and technologies in promoting cultural diversity and preserving ethnic heritage. Letter grading.

288. Measurement, Assessment, and Evaluation of Information Organizations and Services. (4) Lecture, four hours. Introduction and evaluation as formal processes of inquiry with individual components. Demonstration of use of evidence gath-
ered for planning, decision making, and account-
ability in information organizations. Review and imple-
mentation of various methods appropriate to design
of assessment and evaluation studies. Letter grading.

M229C. Introduction to Slavic Bibliography. (2)
(Same as Slavic M229.) Lecture, two hours. Introduc-
tion to Slavic and East European bibliography for the
humanities and social sciences. Emphasis to be de-
termined by requirements and background of enrolled
students. Relevant library terminology and concepts; survey of languages and transliteration systems;
aquisition of Slavic and East European li-
brary materials; Slavic and East European scholarship
in the West; relevant reference sources, archival re-
sources, and research methods; survey of online da-
tabases; compilation of bibliographies. S/U grading.

233. Records and Information Resources Manage-
ment. (4) Lecture, three hours. Introduction to records
and information resources management in corporate,
government, and other organizational settings, in-
cluding analysis of organizational information flow,
classification and filing systems, records retention
scheduling, records protection and security, repro-
graphics and image management technology, and lit-
gation support. Letter grading.

234. Contemporary Children’s Literature. (4)
Lecture, four hours. Reading interests and correla-
tive types of bibliographic reference to growth
and development of children. Emphasis on role of li-
brarian in responding to needs and abilities of chil-
dren through individualized reading guidance. S/U or
letter grading.

236. Approaches to Materialities of Texts and Me-
dia. (4) Seminar, two hours; discussion, 90 minutes.
Introduction to traditional and current thinking about
materialities of texts, book s, documents, and digital
and print artifacts. Draws on conventional bibliog-

dical bibliography, with particular emphasis on hand-
press books. Printing processes as related to bibliog-
raphy and media studies, demonstrations, workshops,
and experiments in design, composition, and press
work. Letter grading.

M238. Environmental Protection of Collections for
Museums, Libraries, and Archives. (4) (Same as
Conservation M246.) Lecture, two hours; laboratory,
two hours. Requisite: course 432. Review of environ-
mental and biological agents of deterioration, in-
cluding light, temperature, relative humidity, pollution,
insects, and fungi. Emphasis on monitoring to identify
agents and understanding of materials sensitivities,
along with protective measures for collections. Letter
grading.

240. Management of Digital Records. (4) Lecture,
three hours. Introduction to long-term management of
digital additions to text, data, documentation, images,
and research systems and records. Topics in-
clude electronic recordkeeping, enterprise and risk
management, systems analysis and design, metadata
development, data preservation, and technical standards
and policy development. Letter grading.

241. Digital Preservation. (4) Lecture, three and one
half hours. Nature of digital media and networking ne-
cessitates reformulation of traditional concepts such
as authenticity, authorship, and originality; informa-

t and metadata that are specifically designed to
manage preservation process; new ethical, rights,
and collaborative frameworks; and economic, legal,
and policy tools with which to manage digital informa-
tion over long term. Introduction to strategies, tech-
niques, and standards, as well as new tools and mov-
ing image materials, social media and personal digi-
tal archives. Implications for digital preservation of
new technologies and applications. Letter grading.

245. Information Access. (4) Lecture, two hours;
discussion, one hour. Requisites: courses 200, 260.
Provides fundamental knowledge and skills enabling
information professionals to link users with informa-
tion. Overview of structure of literature in different
fields; information-seeking behavior of user groups;
communication with users; development of search
strategies using print and electronic sources. Letter
grading.

246. Information-Seeking Behavior. (4) Lecture,
three hours; discussion, one hour. Study of factors
and influences, both individual and social, associated
with human beings needing, using, and acting on in-
formation. Topics include psychological theory, human
information processing, information flow among so-
cial and occupational groups, and research on infor-
mation needs and uses. Letter grading.

250. Techniques and Issues in Information Access.
(4) Lecture, four hours. Requisite: course 245. Gen-
eral reference materials (not specific to subject ac-
cess), with advanced work in reference process and
in cognitive and behavioral aspects of inquirers and ex-

251. Seminar: Specialized Literatures. (4) Seminar,
four hours. Requisite: course 245. Exposure to major
literatures across spectrum of disciplines in three broad
areas: (1) history and humanities; (2) social sci-
cences; (3) natural sciences and engineering. Students
become familiar with knowledge structures; emphasis
on reference and information sources for scholarly re-
search. Letter grading.

M253. Medical Knowledge Representation. (4)
(Same as Bioengineering M226.) Seminar, four hours;
outside study, eight hours. Designed for graduate stu-
dents, issues related to medical knowledge represen-
tation and medical informatics. Recent advances in
information processing, information flow among so-
cial groups and communities; role of medical infor-
matics in clinical practice; recent advances in
research on knowledge representation in the clinical
setting. Letter grading.

M254. Medical Information Infrastructures and In-
ternet Technologies. (4) (Same as Bioengineering M227.)
Lecture, four hours; outside study, eight hours.
Designed for graduate students. Introduction to
networking, communication, and information in-
frastuctures in medical environment. Exposure to
basic concepts related to networking at several levels:
high-level (TP/SP, services), medium-level (net-
work topologies), and high-level (distributed com-
puting, Web-based services) implementations. Com-
monly used medical communication protocols (HL7,
DICOM) and current medical information systems
(HIS, RIS, PACS). Advances in networking, such as
wireless health systems, peer-to-peer topologies,
grid/cloud computing. Introduction to security and
encryption in networked environments. Letter
grading.

M255. Medical Decision Making. (4) (Same as Bio-
engineering M228.) Lecture, four hours; outside study,
eight hours. Designed for graduate students. Over-
view of issues related to medical decision making.
Introduction to concept of evidence-based medicine
and decision processes related to process of care
and outcomes. Basic probability and statistics to un-
derstand research results and evaluations, and algo-
rithmic methods for decision-making processes
(Bayes theorem, decision trees). Study design, hy-
pothesis testing, and estimation. Focus on technical
advances in medical decision support systems and
expert systems, with review of classic and current re-
search. Introduction to common statistical and deci-
sion-making software packages to familiarize stu-
dents with current tools. Letter grading.

256. Information Resources for Business. (4) Lec-
ture, four hours. Requisite: course 245. Introduction to
information needs of business world. Business guid-
ad, cataloging, and indexing; directory services, in-
dexes, loose-leaf services, government publications,
databases, and other sources of business literature.
Letter grading.

258. Legal Information Resources and Libraries.
(4) Lecture, four hours. Introduction to information re-
sources in law, with emphasis on primary authority
and indexes to legal literature. Legal research skills.
Law library services and management. Letter grading.

259. Seminar: Information Access. (4) Seminar, four
hours. Requisite: course 245. Discussion of policies
and issues related to basic and advanced reference
materials, reference process, and psychological as-
pects of inquirers and expert reference librarians.
Letter grading.

260. Description and Access. (4) Lecture, three and
one half hours. Social, cultural, and technical prac-
tices—formal and informal, institutional and per-
sistent—which underlie the various forms of infor-
mation are organized and represented. Design, de-
evlopment, and evaluation of techniques and tools,
including data models, metadata s, information in-
frastructures in medical environment. Exposure to
relevant communication protocols (HL7, DICOM)
and current medical information systems (HIS, RIS, PACS).
Letter grading.

262A. Data Management and Practice. (4) Lecture,
three and one half hours. Designed for M.L.I.S. and
Ph.D. students. Survey of landscape of data practices
and services, including data-intensive research
methods; social studies of data practices; compari-
sions between disciplines; management of data by re-
search teams, data centers, libraries, and archives;
practices of data sharing and reuse; and introduction
to national and international policy for stewardship of
data. Assessment of data archiving needs of one re-
search community and group project to develop real
data management plan in partnership with UCLA re-
searchers in other academic departments. Letter
grading.

262A. Data Curation and Policy. (4) Lecture, three
and one half hours. Designed for M.L.I.S. students.
Continuation of course 262A to address topics of
data curation and policy in more depth. Data selec-
tion and appraisal, archives and repositories, eco-
nomics of data management, data citation and met-
rics, technologies for data access and curation, prov-
enance, intellectual property, policy roles of multiple
stakeholders in data, and institutional challenges in
curation and stewardship of research data. Assess-
ment of data archiving needs of one research
community and group project to develop real
data management plan in partnership with UCLA re-
searchers in other academic departments. Letter
grading.

263. Seminar: Information Access. (4) Seminar, four
hours. Requisite: course 260, one other infor-
mation structures course. Specialized studies in se-
lected areas of descriptive and bibliographical cata-
logs, archives, subject vocabularies, indexing, and
metadata. May be repeated once. Letter grading.

270. Systems and Infrastructures. (4) Lecture, four
hours. Social, cultural, and technical practices
through which information and media infra-
structures work. Networks, systems, and services, con-
nectivity, and interfaces, standards, institutions,
bureaucracies, markets—are designed, built, main-
tained, and evaluated. Ways in which information infrastructures both shape and are shaped by governmental policy, insti-
tutional decision making, socioeconomic trends,
labor movements, technical advances, and profes-
sional and personal value systems, at levels ranging
from local to global. S/U or letter grading.
271. Introduction to Computer Systems and Programming. (4) Lecture, three and one-half hours. Introduction to computer programming and survey of foundational computer science topics, including boolean logic, computer architecture, operating systems, algorithms, networks, and databases. Focus on practical skills for manipulating library and archive metadata, such as searching, sorting, regular expressions, writing database queries, calling application programs, interfacing and handling multiple serialization formats (XML, JSON, CSV, Excel). Emphasis on working with standard metadata encodings, such as MARC and EAD. Letter grading.

272. Systems Interconnection. (4) Lecture, four hours. Survey of social, behavioral, design, and evaluation issues in human/computer interaction, with readings from several disciplines. Extensive use of technology demonstrations and class discussions. Recommended for students in any discipline involved in design or implementation of information technologies. Letter grading.

273. Communities, Information, and Civic Life. (4) Seminar, three and one-half hours. Investigation of concepts of culture and diversity through direct collaborations with diverse communities in Los Angeles region. Consideration of major issues around well-being in contemporary America with some eye toward larger global dynamics from fields as wide-ranged as sociology, media studies, anthropology, and urban studies. Investigation of range of theoretical models and applied literature to develop group-based project designed in collaboration with one community of student choice in Los Angeles area. Examination of community-based methods of interaction and feedback (participatory, ethnography, asset mapping, and action research-based) and propose various information services based on this analysis. Letter grading.

274. Database Management Systems. (4) Lecture, three and one-half hours; laboratory, two hours. Theories, principles, and practicalities of database systems, including data models, retrieval mechanisms, evaluation methods, and storage, efficiency, and security considerations. S/U or letter grading.

275. Community Media and Design. (4) Lecture, two hours; laboratory, two hours. Information professionals, scholars, activists, and information creators/designers/architects focus on questions of culture and community to engage students in understanding information resources as cultural objects. Role of cultural heritage institutions within dynamics presented, but manner in which comes in with emphasis on how comes in with emphasis on how communities can author, and represent information on their own and within their own terms. How new media can begin to serve as platform rather than as infrastructure. Study of impacts of technology on larger scales through readings and introductory sketches. Letter grading.


277. Information Retrieval Systems: User-Centered Designs. (4) Lecture, two hours; discussion, two hours. Requisites: courses 245, 260. Design implications of interaction between users and features of automated information systems and interfaces that are specific to information-seeking process. Emphasis on search strategy and subject access through use of thesaurus and other vocabularies. Letter grading.

278. Visualization. (4) Lecture, two hours; discussion, 90 minutes. Access to and analysis of information through visualization has become increasingly prevalent as digital tools have made creation of and assumptions about user experience, and other graphical features that embody models of information in daily use. What are ways in which organization of visualization presents arguments about knowledge? What historical and critical tools can be brought into useful dialogue with contemporary visualizations? Letter grading.

279. User Experience Design. (4) Seminar, four hours. Preparation: at least one course from 246, 272, 276, 277, 455. Requisites: courses 200, 260. Content varies from term to term to allow emphasis on special topics such as vocabulary control, file design, indexing, classification, text processing, measure- ment of relevance, evaluation of information systems, and social and policy issues related to information technology and services. Letter grading.

280. Social Science Research Methodology for Information Studies. (4) Lecture, four hours. Understanding of nature, uses, and practice of research appropriate to information studies. Identification of research problems and design and evaluation of research. Social science quantitative and qualitative methodologies. Emphasis on inquiry methodology and empirical research. S/U or letter grading.

281. Historical Methodology of Information Studies. (4) Lecture, four hours. Requisite: course 200. Introduction to historical research as it relates to library and information science. Identification of key primary and secondary sources and applied literature to develop group-based project designed in collaboration with one community of student choice in Los Angeles area. Examination of community-based methods of interaction and feedback (participatory, ethnography, asset mapping, and action research-based) and propose various information services based on this analysis. Letter grading.

282. Design as Research Method. (4) Seminar, three and one-half hours. Theories, principles, and application of design as methods for discovery, exploration, and evaluation of user requirements, functionality, values, and system structure. S/U or letter grading.

288. Research Apprenticeship Course. (2 to 4) Seminar, two hours. Use of mentorship model of training graduate students in information studies, with focus on development of student research proposal. Assignment of common readings related to these topics; students have opportunity to offer and receive feedback. May be repeated for credit. S/U grading.

289. Seminar: Special Issues in Information Studies. (2 to 4) Seminar, two to four hours. Identiﬁcation, analysis, and discussion of critical intellectual, social, and technological issues facing the profession. Topics may include expert systems, literary, electronic networks, youth at risk, information literacy, historical bibliography, preservation of electronic media, etc. May be repeated with topic change. Letter grading.

290. Research Seminar: Information Studies. (1 to 2) Seminar, one to two hours. Designed for PhD students. Emphasis on recent contributions to theory, research, and methodology. May be repeated for credit. S/U grading.

291A. Doctoral Seminar: Theoretical Traditions in Information Studies. (4) Seminar, four hours. Nature of information studies—ontological, epistemological, and ethical accounts of information and of information arts and sciences. Conceptions, theories, and models of information; information-related artifacts, agents, contexts, institutions, practices, properties, values, and related disciplinary contexts: subﬁelds of information studies and cognate disciplines. Frameworks for theory construction, such as critical theory; discourse analysis, hermeneutics, phenomenology, semiotics, social epistemology. Letter grading.

291B-291C. Special Topics in Theory of Information Studies. (4-4) Seminar, four hours. Enforced requisites. Course 291A. Topics include information and evidence—recording, interpreting, personal and community identity, accountability and trust. Information and design—design and implementation of information systems and services, information aesthetics, information retrieval, knowledge organization. Information seeking, access, and use—contexts, techniques, needs, barriers. Information and power—groups, ideologies, identities, structures, information and value—information ethics, evaluation of information services. Information policy and law—processes, institutions, players, stakes. Information institutions and professions—domains, ecologies, cultures, communities. Economics, geography, philosophy, politics, sociology of information. Letter grading.

298A. Doctoral Seminar: Research Methods and Design. (4) Seminar, four hour. Survey of quantitative, qualitative, and historical research designs. Ethical issues; conceptualization and measurement, indexes, scales, and sampling; experimental, survey, field, and evaluation research; data analysis. Letter grading.

298B-298C. Special Topics in Methodology of Information Studies. (4-4) Seminar, four hours. Enforced requisite: course 298A. Topics include anthropological fieldwork methods, archival methodology, bibliographical studies, textual analysis, discourse analysis, historical methods, information visualization, network analysis—bibliometrics, informetrics, scientometrics, social network analysis. Letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel placement as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

400. Professional Development and Portfolio Design. (2 to 4) Lecture, two hours; discussion, two hours. Preparation; completion of information studies core courses. Drawing on literature from many fields, exploration of issues related to professional development, such as career planning, continuing education, mentoring, and reflective practice; students also engage in process of guided portfolio design for M.L.I.S. degree. S/U grading.

410. Management Theory and Practice for Information Professionals. (4) Lecture, two hours; discussion, two hours. Principles and practice of management appropriate to information professionals work. Letter grading.


422. College, University, and Research Libraries. (4) Lecture, four hours. Organization, administration, collections, facilities, finances, and problems of college and university libraries and their relationships within institutions of which they are part. Functions of college and university libraries and work of their staffs in serving scholars. Letter grading.


425. Library Services and Programs for Children. (4) Lecture, two hours; discussion, two hours. Theory and practice of service to children in public libraries. Overview of professional library service to children aged 14 and under; provides opportunities for students to gain experience in particular skills needed to provide that service. Letter grading.

428. Young Adult Literacy. (4) Lecture, four hours. Overview of literature which is of interest to young adults (seventh grade and above). Discussion of special problems in working with young people and psychological and social concerns. Letter grading.

427. Young Adult Services. (4) Lecture, 90 minutes; discussion, two hours. Theory and practice of service to teens and tweens in libraries. Overview of professional library service to youth aged 11 and over; opportunities for students to gain experience in partic-
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ular skills needed to provide that service. Discussion of special challenges in working with young people and psychology of teenagers. S/U or letter grading.

430. Library Collection Development. (4) Lecture, three and one half hours. Background of publishing and book trade from digital to antiquarian pertinent to development of collections in public, school, academic, and special libraries. Theory and practice of collection development and management, including evaluation of user needs and assessments of collections. Organization and administration of acquisition and collection development departments. Letter grading.

431. Archives, Records, and Memory. (4) Lecture, four hours. Historical and evolving conceptual foundations, major professional institutions, key practices, and contemporary issues and concerns of archival studies and American archival profession, as well as other fields interested in archives, records, and memory. S/U or letter grading.


433. Community-Based Archiving. (4) Lecture, three and one half hours. Builds on student understanding of professional experience working with communities on development of practical strategies for documenting their activities; managing, collecting, and preserving their records and other historical and cultural materials through community-based collaborative research. Students required to reflect critically on questions about definition, community memory and recordkeeping practices, motivations, positionality and politics, voice, ethics, advocacy; funding and long-term sustainability, ownership, access and use, technological implementation, and collaborations. Letter grading.

434. Archival Use and Users. (4) Lecture, three and one half hours. Requisite: course 431. Examination of who uses archives and why, with ultimate goal of creating ways to better understand and meet needs of these users as well as engage new audiences in archival use. While archivists have traditionally conceived of their users as academic researchers, more thorough investigation expands this conception of users to include genealogists, artists, K-12 students and educators, families of victims of human rights abuse, community members, and members of general public. Methods for studying users, ways to conduct outreach to target user groups, and ways in which archivists can engage general public. Letter grading.

438A. Seminar: Advanced Issues in Archival Science—Archival Appraisal. (4) Seminar, four hours. Requisite: course 431. Evaluation and examination of contributions of key figures in development of archival appraisal theory; identification and evaluation of distinct movements in archival appraisal; identification of cultural, political, sociological, and technological movements that can have impact on appraisal methodologies. Letter grading.

438B. Seminar: Advanced Issues in Archival Science—Archival Description and Access Systems. (4) Seminar, four hours. Requisite: course 431. Exploration of history of archival description and access systems in the U.S. and their development since World War II; data collection; access tools and implications of these tools in development of online archival access systems. Letter grading.

439. Seminar: Special Collections. (4) Seminar, two hours; discussion, 90 minutes. Students work with special collections materials on a focused theme or topic and work with faculty on research projects or exhibit or symposium or collection assessment and then create well-focused and curated agenda for presentation, exhibition, or preservation of materials. Letter grading.


448. Information Literacy Instruction: Theory and Technique. (4) Lecture, four hours. History, theory, methodology, and methods of bibliographic instruction in libraries and other information retrieval environments. Examination of variety of user education/bibliographic instruction theories and methodologies, including overview of planning, administration. Identification of problems in user education/bibliographic instruction. Applications of methods of teaching use of libraries and information resources. S/U or letter grading.

455. Government Information. (4) Lecture, four hours. Introduction to nature and scope of government information promulgated by federal government, as well as by state, municipal, international, and foreign governments. Problem-oriented approach. S/U or letter grading.

457. Health Sciences Librarianship. (4) Lecture, four hours. Health sciences information resources and services, management of health sciences information, content and methods of thesauri, data management, user interface and user environment, and information systems. Letter grading.

461. Descriptive Cataloging. (4) Lecture, four hours. Entry formation from library materials; Constitu- tion, structure, and form of the library catalog; Cata- logging services, tools, and procedures. Cataloging rules and their application. S/U or letter grading.


464. Metadata. (4) Lecture, four hours. Introduction to variety of metadata provided for digitized and other electronic information resources. Introductory theory and practice designing and applying metadata. S/U or letter grading.

473. Information Technology and Libraries. (4) Lecture, four hours. Overview of major components of library automation: circulation control, acquisitions and serials, public access information systems, and data conversion. Relationships among various automation entities, including internal library automation, networks and vendors (such as bibliographic utilities, regional networks, and online services), and automation of parent organizations (universities, municipalities, corporations, and government agencies). Development in standards for information processing and new information technologies. Letter grading.

480. Introduction to Media Archiving and Preservation. (4) Seminar, four hours. Overview of history, conceptual foundations, policies, institutions, and professional methods that have shaped collections of audiovisual and related materials from early 20th century to present. Introduction to fundamental archival concepts and key practices, including collection development, appraisal, preservation, restoration, arrangement and description, and analysis of their specific application to media collections and materials. Discussion of classical and emergent models for media archive administration, including funding, pro- grammatics, outreach, access, and reuse; changing role of technology in media creation, collection, and preservation; ethics and community standards; differ- ent roles of public, private, and national media arch- ives; and cultural impact of historical and contem- porary audiovisual media. Letter grading.

495. Teaching Assistant Training Seminar. (2) Sem- inar, two hours. Limited to departmental doctoral stu- dents. Preparation for teaching assistant appoint- ments in departmental undergraduate courses. Prin- ciples of instructional design and evaluation, curriculum development, instructional technology use, and key teaching issues (diversity, students with disabilities, academic integrity, copyright). S/U grading.

497. Fieldwork in Libraries or Information Organiza- tions. (4 or 8) Fieldwork, 12 or 24 hours depending on nature and complexity of experience or project. Faculty-directed field experience in approved library, archival, or other information setting. Fieldwork expe- riences may include opportunities in state, national, and international institutions. S/U grading.

498. Internship. (4) Discussion, to be arranged. Su- pervised professional training in a library or informa- tion center approved by internship coordinator. Min- imum of 120 hours per term. May be repeated twice. S/U grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of graduate adviser and graduate dean, and host campus instructor, de- partment chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. Directed special studies in fields of bibliography, librarianship, and information science. Variable conference time depending on nature, extent or complexity of research. S/U grading.

597. Directed Studies for PhD Qualifying Examina- tions. (2 to 12) Tutorial, to be arranged. S/U grading.


599. PhD Research and Writing. (2 to 12) Tutorial, to be arranged. S/U grading.

INTEGRATIVE BIOLOGY AND PHYSIOLOGY

Outstanding faculty

College of Letters and Science
125 Hershey Hall
Box 957246
Los Angeles, CA 90095-7246
310-825-5022, Graduate Office
mdiaz@lifesci.ucla.edu
310-825-3892, Undergraduate Office
gerge@physci.ucla.edu
https://www.lib.ucla.edu

Barnett A. Schlinger, PhD, Chair
Rachelle H. Crosbie-Watson, Vice Chair
Walter H. Metzner, PhD, Vice Chair
Patricia E. Phelps, PhD, Vice Chair

Professors
Arthur P. Arnold, PhD
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David L.Glazman, PhD
Fernando Gómez-Pinilla, PhD, in Residence
David A. Grinnell, PhD
Walter H. Metzner, PhD
Peter M. Narins, PhD
Patricia E. Phelps, PhD
Gina R. Poe, PhD
Barnett A. Schlinger, PhD
Judith L. Smith, PhD
James G. Tidball, PhD
David W. Walker, PhD
Applicants interested in pursuing graduate study in all areas of physiological science, while completing the following introductory courses prior to admission to UCLA: one year of general biology with laboratory for majors, preferably equivalent to Life Sciences 1 and 2 OR 7A, 7B, and 7C, one year of calculus, one year of general chemistry with laboratory for majors, and one semester of organic chemistry with laboratory. A grade of C or better is required in Physiological Science 107 and 111A taken for a letter grade, and a C average must be maintained in any courses for the major. Each required and elective course must be taken independently, concurrently, or in either sequence. Understanding of human body, its organization from molecular to cellular to tissues and organs, and how component parts function in integrated manner to permit life as we know it. P/NP or letter grading.

5. Issues in Human Physiology: Diet and Exercise. (5) Lecture, three hours; laboratory, two hours. Not open to Physiological Science majors. Basic introduction to principles of human biology, with special emphasis on roles that exercise and nutrition play in health, and prevention and management of such illnesses as hypertension, diabetes, and heart disease. P/NP or letter grading.


7. Science and Food: Physical and Molecular Origins of What We Eat. (5) Lecture, three hours; discussion, 30 minutes; laboratory, 90 minutes. What makes lettuce crispy and some cuts of meat chewier than others? Exploration of origins of food texture and flavor, using concepts in physical sciences to explain macroscopic properties such as elasticity and phase behavior, as well as physiological role of food molecules in plants and animals we eat. Letter grading.

13. Introduction to Human Anatom y. (5) Lecture, four hours; laboratory, one hour. Not open to Physiological Science majors. Structural survey of human body, including skeletal, muscular, nervous, circulatory, respiratory, digestive, and genitourinary systems. Laboratory includes examination of human cadaver specimens. Letter grading.

90. Introduction to Physiological Science. (2) Lecture, one hour; discussion, one hour. Limited to freshmen/sophomores. Introduction to current topics in physiological science by a team of departmental faculty members. P/NP grading.
Upper-Division Courses

100. Experimental Statistics. (4) Lecture, four hours. Introduction to statistics with focus on computer simulation instead of formulas. Bootstrap and Monte Carlo methods used to analyze physiological data. P/NP or letter grading.

CM102. Human Physiological Systems for Bioengineering I. (4) (Same as Bioengineering CM102.) Lecture, three hours; laboratory, two hours. Preparation: human molecular biology, biochemistry, and cell biology. Not open for credit to Physiological Science majors. Broad overview of basic biological activities and organization of human body in system (organ/tissue) to system basis, with particular emphasis on molecular basis. Modeling/simulation of functional aspect of biological system included. Actual demonstration of biomedical instruments, as well as visits to biomedical facilities. Concurrently scheduled with course CM204. Letter grading.


M106. Neurobiology of Bias and Discrimination. (Same as Neuroscience M117 and Psychology M118.) Seminar, three hours; discussion, one hour. Limited to introduction to neuroscience, psychological science, and psychology students. Exploration of aspects of mammalian brain function that generate preference, bias, and discrimination. Consideration of research at the intersection of analysis from genetics to neural circuits to behavior. Discussion of societal implications of these research findings, their relevance to public policies and criminal justice system. Letter grading.

107. Systems Anatomy. (5) Lecture, four hours; laboratory, three hours; tutorial, two hours. Requisites: Life Sciences 2, Physics 1A or 6A. Students must receive grade of C or better to proceed to next course in series. Systems anatomy focused primarily on human anatomy. Topics include cardiovascular, reproductive, nervous, and skeletal systems, with introduction to biomechanical principles. Letter grading.


111A-111B. Foundations in Physiological Science. (6-6) Lecture, four hours; discussion, two hours. Letter grading. 111A. Requisites: course 107, Chemistry 14C or 5. Life Sciences 1, 2, 3, 4, 23L, Physics 1B or 6B, and Chemistry 5C. Students must receive grade of C or better to proceed to next course in series. Introduction to principles of musculature and neural physiology, including factors controlling membrane excitability; neuronal morphology and function; receptors and messenger systems, sensory, motor, and behavior. Letter grading.

1111L. Physiological Science Laboratory. (3) Laboratory, four hours. Requisites: courses 111A and 111B, with grades of C– or better. Introduction to Physiological Science majors. Designed to illustrate physiological principles studied in courses 111A, 111B. Letter grading.

120. Kidney: Understanding It from Development to Disease to Therapy. (4) Enforced requisites: courses 111A, 111B. Review of knowledge of basic renal function, with emphasis on range of renal diseases and their molecular mechanisms. Introduction to the field and typically employed in studies of kidney and exploration of state-of-art research on kidney repair and regeneration. Letter grading.

121. Disease Mechanisms and Therapies. (5) Lecture, three hours; discussion, one hour. Enforced requisites: Life Sciences 2, 3, 4, 130A. Designed for Biochemistry and life sciences majors. Use of disease mechanisms as pedagogical tools to develop higher-order knowledge of basic scientific concepts. Integration of concepts from genetics, molecular and cell biology, physiology, and biochemistry to create molecular solutions to problem of inherited neuroendocrine disease. Letter grading.

122. Biomedical Technology and Physiology. (4) Lecture, four hours. Enforced requisites: courses 111A, 111B, Life Sciences 2, Physics 1A, 1B, 1C (or 5A, 5B, 5C). Development of medical technology and impact on diagnosis and treatment of disease, basic engineering principles, and designs that lend themselves to deciphering physiological states, and application of new technology in clinical practice and biomedical research. Letter grading.

124. Molecular Biology of Aging. (4) Lecture, three hours. Enforced requisites: Chemistry 133T, Life Sciences 1, 2, 3, 4, 23L. Discoveries of new field of aging biology, as well as the properties of plastic traits modulated by genes and physiological processes. Discussion of how these findings integrate with both nutritional modulation of lifespan and complex and profound relationship between underlying aging process and diseases of aging. Topics include dietary restriction, mitochondria, insulin/IGF signaling, and link between tumor suppression and organizational aging. Letter grading.

125. Molecular Systems Biology. (5) Lecture, three hours; discussion, one hour. Enforced requisites: Life Sciences 2, 3, 4, 23L. Quantitative description of molecular systems that underlie myriad phenotypes in living organisms. Topics include transcriptomics, proteomics, microarrays, high-throughput technologies, network biology, and synthetic biology. Introductory lectures on molecular biology, emerging bioinformatic approaches, and systems modeling integrated with discussions of their applications in disease-related research. Review of recent literature to gain overall perspectives about new science of systems biology. Letter grading.

126. Biological Clocks. (4) Lecture, three hours; discussion, one hour. Requisites: courses 111A and 111B, or M180A and M180B. Most organisms, including humans, exhibit daily rhythms in physiology and behavior. In mammals these rhythms are generated from within organisms and are called circadian rhythms. Biological basis of these daily rhythms or circadian oscillations. Exploration of molecular cellular, and organ-level organization of mammal time systems. Temporal role of these variations in maintaining homeostatic mechanisms of body and impact on nervous system. Concurrently scheduled with course C226. Letter grading.


128. Me, Myself, and the Microbiome: The Microbiome in Health and Disease. (5) Lecture, four hours; discussion, one hour. Recommended: Chemistry 133A, Life Sciences 2 and 3 or 7A, 7B, and 7C. Exploration of host-microbiome interactions in health and disease, drawing upon basic properties for microbial communities, interactions with immunology, metabolism, and neurobiology. Letter grading.

130. Dynamical Systems Modeling of Physiological Processes. (5) Lecture, four hours; laboratory, two hours. Examination of art of making and evaluating mathematical models in dynamical systems modeling fields of dynamical principles inherent in physiological systems. Letter grading.


M140. Hormones and Behavior in Humans and Other Animals. (4) (Same as Anthropology M128 and Psychology M128.) Lecture, four hours; discussion, one hour. Enforced requisite: M107. Forensics and endocrine sampling methods, and which types of questions can be answered in laboratory and field, as well as ethics of hormonal studies and their implications for humans and other animals. Letter grading.

C144. Neural Control of Physiological Systems. (4) Lecture, four hours. Requisite: course 111B or M180B. Role of central nervous system in control of respiration, circulation, sexual function, and bladder control. Material for each section to be developed by combination of lecture and open discussion. Concurrency scheduled with course C244. Letter grading.

M145. Neural Mechanisms Controlling Movement. (5) (Same as Neuroscience M145.) Lecture, four hours; discussion, one hour. Requisite: course 111B. Integration of principles of motor system. Examination of central nervous system organization required for production of complex movements such as locomotion, mastication, and swallowing. Letter grading.

146. Principles of Nervous System Development. (5) Lecture, three hours; discussion, 90 minutes. Requisites: courses 107 (or Neuroscience 102) and 111A (or M180A, Molecular, Cell, and Developmental Biology M175A, Neuroscience M101A, or Psychology M117A). Examination of construction of vertebrate nervous system as series of integrated steps beginning with several embryonic cells and culminating as complex, highly ordered system. Topics include neuroplasticization, regionalization, neurogenesis, migration, axonal outgrowth, and synapse formation. Letter grading.

148. Neurobiology of Learning and Memory. (5) Lecture, four hours; discussion, one hour. Requisite: course 111A or M180A. Changes in central nervous system that accompany learning, with emphasis on cellular mechanisms.

C149. Systems Neurobiology and Mechanisms of Major Cardiometabolic Diseases. (4) Lecture, three hours; discussion, one hour. Requisites: Life Sciences 7A, 7B, 7C. Strongly recommended: Chemistry 133A. Descriptions of current strategies and principles gained through basic science curriculum with modern systems biology concepts, approaches, and pres-

C252B. Letter grading.

C252. Muscle, Skeletal Anatomy, Physiology, and Biomechanics. (5) Lecture, three hours. Requisite: course 111B. Prior to first meeting, students must complete Bloodborne Pathogens training course through UCLA Environment, Health and Safety. Study and dissection of first meeting, students must complete Bloodborne laboratory, six hours. Requisite: course 111B. Prior to first meeting, students must complete Bloodborne Pathogens training course through UCLA Environment, Health and Safety. Study and dissection of material presented. Students required to present journal articles and from students’ own research. May be repeated for credit. P/NP or letter grading.

M171. Variable Topics Research Seminars: Contemporary Issues in Cellular and Molecular Biology. (5) Lecture, four hours; discussion, 90 minutes. Limited to undergraduate fellows in Howard Hughes Undergraduate Research Program. Presentations of scientific data from primary research articles and from students’ own research. May be repeated for credit. P/NP or letter grading.

M173. Anatomy and Physiology of Sense Organs. (4) Lecture, three hours; discussion, one hour. Requisites: courses 111A, or M180A, or Molecular, Cell, and Developmental Biology M175A and M175B. Structure and function of sense organs. Adoption of quantitative and comparative approach to understanding evolution of sense organs in both invertebrates and vertebrates. Letter grading.

M174. Cell Biophysics in Physiology and Disease. (5) Lecture, three hours; discussion, two hours. Requisites: Chemistry 2A, 3, 4, 23L; Physics 8A, 8B, 8C. Search for information in biological research has traditionally focused on genes and biochemical pathways. While physical aspects of cell biology are critical in physiology and disease, they have received so much less attention in research. For example, mechanical properties of cells determine how physical forces alter gene expression and can signal transformation in physiological state of cells, such as in malignant transformation. Exploration of cell biophysics in health and disease from basic physical principles that underlie structure and organization of cytoskeleton to role of cell deformability in diseases such as cancer. Use of articles from primary literature regarding current research. Letter grading.

M175. Why Fido Can’t Speak: Biological Evolution of Language. (5) Lecture, three hours; discussion, one hour. Requisites: course 111A (may be taken concurrently), Life Sciences 4 with grade of C– or better, Developmental and Molecular Genetics of Duchenne muscular dystrophy and some fundamental scientific findings using original scientific research. Exploration of theories aimed at individual stages of pathogenetic disease as method to develop critical expert-like thinking skills. Lectures based on experiments from primary scientific literature, and students expected to understand genetic and phenotypic animal models of muscle dystrophy, to design experiments, and to predict outcomes from research data. Letter grading.

M180A. Cellular and Systems Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisites: Chemistry 14C or 30A (14C may be taken concurrently), Life Sciences 2, Physics 1B or 1BH or 6B or 6BH. Not open for credit to students with credit for Physiology M175A-M175B-M175C. For Neuroscience majors, grade of C– or better is required to proceed to Neuroscience M101B or Physiological Science 111B. Cellular neuroscience, motor control, potential, and physiology of fuel utilization during aerobic and anaerobic exercise. Letter grading.

M180C. Behavioral and Cognitive Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisit: courses 111A or M180A (or Molecular, Cell, and Developmental Biology M175A or Neuroscience M101A or Psychology M117A; Neuroscience majors must have grade of C– or better) or Psychology 115. Neural mechanisms underlying motivation, learning, and cognition. P/NP or letter grading.

M181. Biological Bases of Psychiatric Disorders. (4) (Same as Molecular, Cell, and Developmental Biology M181, Neuroscience M130, Psychiatry M181, and Psychology M117J.) Lecture, three hours. Requisites: courses 111A or M180A, or Molecular, Cell, and Developmental Biology M175A or Neuroscience M101A or Psychology M117A. Underlying brain systems involved in psychiatric symptoms and neurological disorders, including schizophrenia, depression, bipolar disorder, obsessive-compulsive disorder. Provides basic understanding of brain functions that contribute to disorders and rationales for pharmacological treatments. P/NP or letter grading.


191H. Honors Seminars: Current Topics in Physiology. (4) Seminar, two hours. Enforced requisites: courses 198A, 198B. Limited to neuroscience and physiological science honors program students. Designed for juniors/seniors and required of departmental honors students. Presentation of primary paper from physiology literature. Reading and critical evaluation of current research literature. Presentation
of student laboratory research hypothesis, approach, and results in form of oral and poster presentations. Letter grading.

192. Practicum in Systems Anatomy for Undergraduate Assistants. (3) Seminar, two hours; additional hours by arrangement, to be arranged. Limited to juniors/seniors. Training and supervised practicum in systems anatomy for undergraduate assistants. Consult Undergraduate Office for further information. May not be applied toward elective requirements and may not be repeated for credit. Departmental application required. P/NP or letter grading.

193. Journal Club Seminars: Physiological Science. (1) Seminar, two hours. Corequisite: course 198A or 198B. Limited to juniors/seniors. Involvement in weekly laboratory research group meetings to encourage student participation in research and to stimulate progress in specific research areas. Prerequisite knowledge required. Methods and currents in literature in field of research of faculty members or students. May be repeated for credit. P/NP grading.

194. Research Group Seminars: Physiological Science. (2) Seminar, two hours. Required of undergraduates in research traineeships such as MARC and UC Leads programs. Discussion of research methods and current literature in field or of research of faculty members. May be repeated for credit. Letter grading.

194A. Research Group Seminars: Physiology. (2) Seminar, two hours. Corequisite: course 198A. Limited to juniors/seniors. Development and completion of honors thesis with emphasis on levels of organization from molecular to system basis, with particular emphasis on cardiovascular adaptations to acute exercise and oscillators, and molecular events in development in sensory perception and learning, neural nets and physiology of receptors, cellular basis of integration in sensory perception and learning, neural nets and oscillations, and molecular events in development and sexual differentiation. Letter grading.

194B. Research Group Seminars: Physiological Science. (1) Seminar, two hours. Corequisite: course 198A or 198B. Limited to juniors/seniors. Involvement in weekly laboratory research group meetings to encourage student participation in research and to stimulate progress in specific research areas. Prerequisite knowledge required. Methods and currents in literature in field or of research of faculty members or students. May be repeated for credit. P/NP grading.

195. Field Studies in Physiological Science. (4) Tu- torial, one hour; fieldwork, eight hours. Limited to seniors. Supervised field studies in specific careers related to physiological science. May not be repeated for credit and may not be applied toward elective requirements for major; contact department with supervising faculty member required. P/NP grading.

196. Research Apprenticeship in Physiological Science. (2 to 4) Tutorial, three hours per week per unit. Limited to juniors/seniors. Entry-level research apprenticeship for upper-division students under guidance of faculty mentor. May be repeated for credit; consult department. Individual contract required. P/NP grading.

196A. Honors Research in Physiological Science. (4) Tutorial, 12 hours. Requisite: courses 111A, 111B, Corequisite: course 193. Limited to junior/se- nior physiological science honors program students. Directed independent research for departmental honors with faculty member, involving definition of research topic and extensive reading and research in field of proposed honors thesis. May be repeated for credit. Individual contract required. Progress grading (credit to be given only on completion of course 198B).

198B. Honors Research in Physiological Science. (4) Tutorial, 12 hours. Requisite: course 198A, Corequisite: course 193, Limited to junior/senior physiological science honors program students. Continued reading and research that culminate in final honors thesis. Only 4 units of course 198 or 3 units of course 198 and 1 unit of course 193 may be applied toward elective requirements for major. May be repeated for credit. Individual contract required. Letter grading.

198C. Advanced Studies for Honors Research in Physiological Science. (4) Tutorial, 12 hours. Requisite: course 198A, Corequisite: course 193, Limited to junior/senior physiological science honors program students. Additional course to provide further research opportunities for departmental honors students. Development of independent honors or comprehensive research project under direct supervision of faculty member. May be repeated for credit. Individual contract required. Letter grading.

199. Directed Junior Project in Physiological Science. (2 to 4) Tutorial, 12 hours. Requisites: courses 111A, 111B, Corequisite: course 193. Limited to Physiological Science majors with advanced junior standing and 3.0 grade-point average in major, or seniors. Supervised individual research under guidance of faculty mentor. Culuminating paper or project required. Course application must be submitted to undergraduate affairs chair during first week of enrollment. May be repeated toward elective requirements for major. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200. Advanced Experimental Statistics. (4) Formerly numbered M200X. Lecture, four hours; labora- tory, one hour. Introduction to statistics with focus on computerized data analysis and applications of Bootstrap and Monte Carlo methods to analyze physiological data. S/U or letter grading.

M202. Cellular Neurophysiology. (4) Same as Neu- robiology M202F and Neuroscience M202J. Lecture, three hours; discussion, two hours. Requisites: course 111A (or M180A or Physics 68B). 166, advanced course in cellular physiology of neurons. Action and membrane potentials, channels and neuronal blockers, gates, ion pumps and neuronal homeo-stasis, synaptic receptors, drug-receptor interactions, transmitter release, modulation by second messen- gers, and sensory transduction. Letter grading.


CM204. Human Physiological Systems for Bioen- gineering II. (4) (Same as Biomedical Engineering CM202.) Lecture, three hours; laboratory, two hours. Prerequisites: human molecular biology, biochemistry, and cell biology. Not open for credit to Physiological Science majors. Broader overview of basic biological activities and organization of higher level body (organ/tissue) to system basis, with particular emphasis on molecular basis. Modeling/simulation of functional as- pect of physiological system included. Actual demonstration of biomedical devices and their visits to bio- medical facilities. Concurrently scheduled with course CM102B. Letter grading.


211. Exercise Cardiovascular Physiology. (4) Atten- tion to cardiovascular adaptations to acute exercise as well as adaptations associated with regular exercis- e training.

M215. Molecular and Cellular Foundations of Physiology. (5) Same as Molecular, Cellular, and In- tegrative Physiology M215B. Lecture, three hours; dis- cussion, two hours. Application of molecular and cellular approaches to study fundamental level questions. Basic foundation for study of major physiological systems, with emphasis on levels of organization from molec- ular to macroscopic. Letter grading.

C226. Biological Clocks. (4) Lecture, three hours; discussion, one hour. Requisites: course 111A or 111B, or M180A and M180B. Most organisms, including humans, exhibit daily rhythms in physiology and behavior. In many cases these rhythms are gen-


270A-270B. Modern Concepts in Physiology. (4-4) Lecture, two hours; discussion, two hours. Study and evaluation of primary research literature. Study of foundations of modern techniques in physiology research, analysis of research design, Letter grading.

270A. Highly recommended requisite or corequisite: course 111A. Foundation for experimental study of principles of muscular and neural physiology and cellular and systems neuroscience, including factors controlling membrane excitability, neuronal circuits, senses, special senses, cortical functions, and neural plasticity. 270B. Highly recommended requisite or corequisite: course 111B. Foundation for experimental study of principles of systems physiology, including cellular and systems neuroscience, transport physiology, and neural, cardiovascular, and pulmonary physiology.


289A-289B. Introduction to Integrative Biology and Physiology. (2-3) Seminar, one hour. Limited to departmental graduate students. Letter grading. 289A. Formerly numbered 289.) Introduction to departmental faculty research program. Students have three laboratory rotations at end of which they must select one research mentor. 289B. Requisite: course 289A. Introduction to departmental faculty research program.

M290. Seminar: Comparative Physiology. (2) (Same as Ecology and Evolutionary Biology M290.) Seminar, two to four hours. Discussion of specific topics in comparative physiology of animals. Topics vary from year to year, with emphasis on systems physiology, neuroethology, or behavioral physiology. S/U or letter grading.

291A-291B-291C. Seminars: Cardiovascular Function and Adaptation. (2 to 4 each) Seminar, two to four hours. Selected topics on cardiovascular function and adaptation. Students required to present two-hour seminar. Letter grading.

292. Evolution and Development of Auditory System. (2 or 4) Seminar, two hours. Discussion of specific topics related to evolution, embryology, morphology, genetics, and development of the auditory system, with special attention to central nervous system. Emphasis on primary literature sources as well as current methodological approaches. Two-hour seminar presentation required for 2 units; seminar paper and two-hour seminar presentation required for 4 units. S/U or letter grading.

293A-293B-293C. Seminars: Musculoskeletal Function and Adaptation. (2 to 4 each) Seminar, one hour. Requisites: courses 138, 260. Selected topics on musculoskeletal determinants of movement, metabolic aspects of exercise, and mechanics of connective tissue. Students required to present two-hour seminar. S/U or letter grading.

294. Recent Advances in Neurophysiology. (1) Seminar, one hour. Requisite: Life Sciences 2 or undergraduate degree in science. Critical examination and discussion of recent data and publications that focus on synaptic function. Student presentations, readings, and participation in discussions required. S/U grading.


296. Research Seminar: Physiological Science. (2) Review of literature, discussion of original research, and analysis of current topics in physiological science. May not be applied toward MS or Ph.D. course requirements. May be repeated for credit. S/U grading.

297. Seminar: Muscle Cell Biology. (2 to 4) Seminar, two hours. Selected topics in muscle cell biology. Students required to present two-hour seminar. May be repeated for credit.

298. Seminar: Nervous System Development. (1 to 2) Seminar, two hours. Selected topics in development of neural migration, axonal guidance, gene expression, and synaptogenesis. Weekly one-hour seminar presentation on assigned weekly reading required of all students; students enrolled for 2 units must also complete written analysis of additional primary literature papers. May be repeated for credit. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. In-Service Practicum for Teaching Assistants in Physiological Science. (2) Seminar, to be arranged. Required of all teaching assistants. Supervised practicum in teaching laboratory courses in physiological science; material preparation and use of teaching aids. May not be applied toward degree requirements. S/U grading.

501. Cooperative Program. (2 to 8) Preparation: consent of UCLA graduate advisor and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Individualized Studies for Graduate Students. (2 to 8) Tutorial, to be arranged. To enroll for letter grade, petition signed by faculty sponsor, graduate advisor, and graduate committee chair must be submitted to admittee on or before second week of quarter. Eight units may be applied toward degree requirements for MS or PhD degree, provided that students enroll in two different 4-unit 596 courses in different laboratories under supervision of different mentors. Term paper required for letter grade. S/U or letter grading.

597. Preparation for MS Comprehensive Examination or PhD Qualifying Examinations. (2 to 16) Tutorial, to be arranged with faculty member serving as student's comprehensive examination chair or PhD committee chair. May not be applied toward MS or PhD course requirements. May be repeated as necessary. S/U grading.

598. Research and Preparation of MS Thesis. (2 to 16) Tutorial, to be arranged with faculty member serving as student's thesis committee chair. May not be applied toward MS course requirements. May be repeated as necessary. S/U grading.

599. Research and Preparation of PhD Dissertation. (2 to 16) Tutorial, to be arranged. May not be applied toward PhD course requirements. May be repeated as necessary. S/U grading.
Preparation for the Major

Required: (1) International and Area Studies 1, (2) one area studies course from Afrikaans 40, Art History 28, History 9D, 10B, 97F, 97J, Middle Eastern Studies 50C, Portuguese 40A, or Theater 4, (3) two international politics and markets courses from Economics 1, 2, Geography 4, 6, Political Science 50 (or 50R), Sociology 1, (4) two international societies and cultures courses from Anthropology 3, Comparative Literature 1D (or 2DW or 4DW), Ethnomusicology 5, 25, Geography 3, History 28, 22, World Arts and Cultures 20, 33, and (5) one area-related foreign language sequence through the intermediate level (e.g., Arabic 102C, Armenian 102C, 105C, Hebrew 102C, Iranian 102C, Turkic Languages 102C, 112C, 116C). The language requirement can also be fulfilled in part or in total by taking a placement examination given through the appropriate language department. Each course must be taken for a letter grade.

Transfer Students

Transfer applicants to the African and Middle Eastern Studies premajor with 90 or more units must complete the following introductory courses prior to admission to UCLA: two courses from sociocultural anthropology, cultural geography, contemporary world history, and world literature and two courses from comparative politics, economic geography, macroeconomics, microeconomics, and introductory sociology. Transfer students must apply for the major by the end of fall quarter of their junior year.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

The major consists of International and Area Studies 191 (capstone seminar) and 11 upper-division courses divided among area studies and international themes courses. To count as one 4-unit course, 2-unit courses must either be taken twice or two courses from the same category (if applicable) may be taken. Each course must be taken for a letter grade, with a minimum overall grade-point average of 2.0 or better in those courses.

The application period is once per year, and students must apply no later than the end of fall quarter of their junior year.

Meeting the above minimum requirements does not guarantee admission to the program. Admission is on a competitive basis, using the above qualifications as minimum standards for consideration.

African and Middle Eastern Studies Premajor

Incoming freshman and transfer students may be admitted as African and Middle Eastern Studies premajors on acceptance to UCLA. Premajor students must apply for major standing at the end of fall quarter of their junior year; they are not automatically admitted into the major.
Asian Studies Premajor

Incoming freshman and transfer students may be admitted as Asian Studies premajors on acceptance to UCLA. Premajor students must apply for major standing at the end of fall quarter of their junior year; they are not automatically accepted into the major.

Preparation for the Major

Required: (1) International and Area Studies 1, (2) one area studies course from Art History 29, 31, Asian 30, 70A, 70B, 70C, Chinese 50 (or 50W), M60 (or M60W), Centers 25A, History 9A, 9C, 9E, 11B (or 11BH), 97G, 97M, 97N, International and Area Studies 31, 33, Japanese 50, 70, Korean 50, M60, South Asian M60, Southeast Asian M60, or 90, (3) two interna-
tional politics and markets courses from Economics 1, 2, Geography 4, 6, Political Science 50 (or 50R), Sociology 1, (4) two international societies and cultures courses from Anthropology 3, Comparative Literature 1D (or 2DW or 4DW), Ethnomusicology 5, 25, Geography 3, History 2B, 22, World Arts and Cultures 20, 33, and (5) one area-related foreign language se-
quence through the intermediate level (e.g., Chinese 6 or 6A, Filipino 6, Hindi-Urdu 100C, Indonesian 6, Japanese 6, Korean 6, Thai 6, Vietnamese 6). The language requirement can also be fulfilled in part or in total by taking a placement examination given through the appropriate language department. Each course must be taken for a letter grade.

Transfer Students

Transfer applicants to the Asian Studies premajor with 90 or more units must complete the following introductory courses prior to ad-
mision to UCLA: two courses from sociocul-
tural anthropology, cultural geography, con-
temporary world history, and world literature and two courses from comparative politics, economic geography, macroeconomics, mi-
croeconomics, and introductory sociology.

American Studies BA

Capstone Major

The American Studies major allows students to analyze the area or a subregion (e.g., Central and Eastern Europe, Mediterranean Europe, Scandinavia, Western Europe/European Union) from an interdisciplinary and modern perspec-
tive. The major seeks to ground students in broad international issues that they can then use to focus on particular concerns of that part of the world.

Admission

Admission to the European Studies major is by application only. To be eligible to apply, stu-
ents must have completed all nonlanguage preparation for the major courses and the fore-
gn language courses through at least level 3 (elementary level). Any remaining language courses may be completed after students have been accepted to the major. Each preparation for the major course must be taken for a letter grade, and students must have a UC grade-
point average of 2.0 or better in those courses.

The application period is once per year, and students must apply no later than the end of fall quarter of their junior year.

Meeting the above minimum requirements does not guarantee admission to the program. Admission is on a competitive basis, using the above qualifications as minimum standards for consideration.

European Studies Premajor

Incoming freshman and transfer students may be admitted as European Studies premajors on acceptance to UCLA. Premajor students must apply for major standing at the end of fall quar-
ter of their junior year; they are not automati-
cally accepted into the major.

Preparation for the Major

Required: (1) International and Area Studies 1, (2) one area studies course from Central and East European Studies 91, Comparative Litera-
ture 1C, 2CW, 4CW, Dutch 10, English 88G, French 12, 14 (or 14W), 41, 60, German 50B, 57, 59, 61A through 61D, History 1C (or 1CH), 97C, International and Area Studies 40, Italian 42B, 46, 50B, Portuguese 40A, Romanian 90, Russian 25 (or 25W), 30, 31, 32, 90B (or 90BW), Scandinavian 50 (or 50W), Slavic 90, Spanish 42, (3) two international politics and markets courses from Economics 1, 2, Geog-
raphy 4, 6, Political Science 50 (or 50R), So-
ciology 1, (4) two international societies and cultures courses from Anthropology 3, Comparative Literature 1D (or 4DW), Ethno-
musicology 5, 25, Geography 3, History 2B, 22, World Arts and Cultures 20, 33, and (5) one area-related foreign language sequence through the intermediate level (e.g., Czech 102C, Dutch 103C, French 6, German 6, Hun-
garian 102C, Italian 6, Polish 102C, Portu-
guese 3, Romanian 102C, Russian 6, Scandi-
navian 29, 105B, 106B, 107B, Serbian/Croat-
ian 102C, Spanish 5, Ukrainian 102C, Yiddish 102C). The language requirement can also be fulfilled in part or in total by taking a placement examination given through the appropriate lan-
guage department. Each course must be taken for a letter grade.

Transfer Students

Transfer applicants to the European Studies premajor with 90 or more units must complete the following introductory courses prior to ad-
mision to UCLA: two courses from sociocul-
tural anthropology, cultural geography, con-
temporary world history, and world literature and two courses from comparative politics, economic geography, macroeconomics, mi-
croeconomics, and introductory sociology.
Transfer students must apply for the major by the end of fall quarter of their junior year. Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major
The major consists of International and Area Studies 191 (capstone seminar) and 11 upper-division courses divided among area studies and international themes courses. To count as one 4-unit course, 2-unit courses must either be taken twice or two courses from the same category (if applicable) may be taken. Each course must be taken for a letter grade, with a minimum overall grade-point average of 2.0.


The area studies electives listed above (group 1) focus on contemporary issues of that region after 1750. Students may substitute a maximum of three upper-division courses with fo-
cuss on earlier historical aspects of the region or on diasporas with origins related to the region toward the area studies electives as long the distribution between humanities and arts and social sciences is maintained. They may be selected from either of the following lists: humanities and arts group 2: Art History C139A, C139B, C141, Chicana and Chicano Studies M105D, M105E, 109, 142, Ethnomusicology M116, Portuguese 143A or social sciences group 2: Anthropology 114P, 114Q, Chicana and Chicano Studies M119, M159B, 184, M187, History 157B.

Honors Program

The honors program is designed to offer highly motivated students pursuing one of the International and Area Studies majors (African and Middle Eastern Studies, Asian Studies, European Studies, Latin American Studies) the opportunity to design and conduct their own independent research under the guidance of a faculty adviser and consists of a three-term directed-study series of courses—International and Area Studies 198A, 198B, 198C—culminating in an honors thesis.

Admission

To enter the honors program, students must (1) have completed all preparation for the major requirements with a minimum 3.5 grade-point average in those courses, (2) have a 3.5 grade-point average in all upper-division coursework for the major, (3) obtain agreement from a faculty member to supervise their honors thesis, and (4) formally submit an application to the honors program. Application should normally be made during the junior year so as to best plan for completion of the honors thesis during the senior year. Contact the academic counselor for more details about the application, thesis requirements, and guidelines regarding the selection of a faculty thesis adviser.

Requirements

Honors are awarded to students who (1) complete all requirements for the major with a cumulative grade-point average of 3.5 or better in upper-division coursework required for the major, (2) successfully complete courses 198A, 198B, and 198C, and (3) produce an honors thesis in consultation with a faculty member to supervise their honors thesis.

African and Middle Eastern Studies Minor

The African and Middle Eastern Studies minor is designed for students who wish to augment their major with a concert of study of the history, culture, and society of the Africa and the Middle East from an interdisciplinary and modern perspective.

To enter the minor, students must be in good academic standing (overall grade-point average of 2.0 or better) and have completed all lower-division minor courses with a GPA of 2.0 or better in those courses.

Required Lower-Division Courses (13 to 15 units): International and Area Studies 1 and two international societies and cultures courses from Anthropology 3, Comparative Literature 1D (or 2DW or 4DW), Economics 1, 2, Ethnomusicology 5, 25, Geography 3, 4, 6, History 2B, 22, Political Science 50 (or 50R), Sociology 1, World Arts and Cultures 20, 33. Students may substitute one area studies preparation course (from History 5D, 9F, Middle Eastern Studies 50C, or Theater 4) toward the international societies and cultures preparation requirement.

Required Upper-Division Courses (20 to 21 units): Five area studies group 1 courses as follows: (1) two humanities and arts group 1 courses from Arabic M110, 120, C141, M151, Armenian C151, C152, C153, Art History 120, Comparative Literature 148, 152, Ethnomusicology 161N (must be taken twice to equal one 4-unit course), Hebrew M113, C140, 141, 142, Islamic Studies 151, Jewish Studies M142, M144, 175, (2) two social sciences group 1 courses from Anthropology 135, M166Q, 167, History 105C, 107C, 109B, 111C, 167A, M184D, Honors Collegium M157, Political Science 132A, 157, 165, and (3) one additional elective course selected from the group 1 lists above or from the group 2 list below.

The area studies electives listed above (group 1) focus on contemporary issues of that region after 1750. Students may substitute a maximum of one upper-division course with focus on earlier historical aspects of the region or on diasporas with origins related to the region toward the area studies additional elective category (item 3 above). The course may be selected from the following group 2 list: Ancient Near East M130, 150B, C165, Arabic 130, 132, 150, Armenian C155, Art History M110A, M110B, 119A, Hebrew 130, 135, History M103A, M103B, 105A, 105B, M106, 107A, 107D, 111A, 111B, 116A, 116B, Iranian M100A, M100B, M110C, 120, 131, 140, Islamic Studies M110, 130, Jewish Studies M150A, 150B, M151A, M155, M182A, M182B, or M182C.

One upper-division language course (advanced level) may be applied to item 3 above by petition of the chair of the program.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

African Studies Minor

The African Studies minor is designed for students who wish to augment their major with a concert of study of the history, culture, and society of Africa from an interdisciplinary and modern perspective.

To enter the minor, students must be in good academic standing (overall grade-point average of 2.0 or better) and have completed all lower-division minor courses with a GPA of 2.0 or better in those courses.

Required Lower-Division Courses (13 to 15 units): International and Area Studies 1 and two international societies and cultures courses from Anthropology 3, Comparative Literature 1D (or 2DW or 4DW), Economics 1, 2, Ethnomusicology 5, 25, Geography 3, 4, 6, History 2B, 22, Political Science 50 (or 50R), Sociology 1, World Arts and Cultures 20, 33. Students may substitute one area studies preparation course (from Afrikaans 40, Art History 55A, Ethnomusicology 20B, French 60, History 10B, 97J, or Portuguese 40A) toward the international societies and cultures preparation requirement.

Required Upper-Division Courses (20 to 21 units): Five area studies group 1 courses as follows: (1) two humanities and arts group 1 courses from Afrikaans 135, Art History C145A, C145B, Ethnomusicology 136A, C136B, 161E (must be taken twice to equal one 4-unit course), French 121, 142, (2) two social sciences group 1 courses from Anthropology 135, 166P, M166Q, Geography 122, 135, History 164B through 164E, 166B, 167A, 167B, 167C, 168B, Political Science 151A, 151B, 151C, and (3) one additional elective course selected from the group 1 lists above or from the group 2 list below.

The area studies electives listed above (group 1) focus on contemporary issues of that region after 1750. Students may substitute a maximum of one upper-division course with focus on earlier historical aspects of the region or on diasporas with origins related to the region toward the area studies additional elective category (item 3 above). The course may be selected from the following group 2 list: Ancient Near East M130, 150B, C165, Art History M110A, M110B, French 160, Geography 114, History M103A, M103B, 166A, 168A, or World Arts and Cultures C139.

One upper-division language course (advanced level) may be applied to item 3 above by petition of the chair of the program.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.
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East Asian Studies Minor
The East Asian Studies minor is designed for
students who wish to augment their major with
concerted study of the history, culture, and
society of East Asia—China, Korea, and
Japan—from an interdisciplinary and modern
perspective.

One upper-division language course (advanced level) may be applied to item 3 above
by petition to the chair of the program.
A minimum of 20 units applied toward the minor requirements must be in addition to units
applied toward major requirements or another
minor.

To be admitted to the minor, students must be
in good academic standing (overall gradepoint average of 2.0 or better) and have completed all lower-division minor courses with a
GPA of 2.0 or better in those courses.

Each minor course must be taken for a letter
grade, and students must have an overall
grade-point average of 2.0 or better. Successful completion of the minor is indicated on the
transcript and diploma.

Required Lower-Division Courses (13 to 15
units): International and Area Studies 1 and
two international societies and cultures
courses from Anthropology 3, Comparative Literature 1D (or 2DW or 4DW), Economics 1, 2,
Ethnomusicology 5, 25, Geography 3, 4, 6,
History 2B, 22, Political Science 50 (or 50R),
Sociology 1, World Arts and Cultures 20, 33.
Students may substitute one area studies
preparation course (from Art History 29, Asian
30, 70A, 70B, 70C, Chinese 50, 50W, M60,
70, Korean 50, or M60) toward the international
societies and cultures preparation requirement.

European Studies Minor

Required Upper-Division Courses (20 to 21
units): Five area studies group 1 courses as follows: (1) two humanities and arts group 1
courses from Art History C148D, C148E,
C150B, Asian 130, 151, 152, 161, 162, 163,
Chinese C120, 130A, 130B, 135, 139, C150A,
C150B, 151, 152, 154, 155, C156, 157,
CM160, 165, 174, 176, 180, 185, 191B, Comparative Literature M176, Ethnomusicology
C156A, C159, 160, 161J (must be taken twice
to equal one 4-unit course), Japanese C112,
130A, 130B, 130C, C131, C150, 151, 154, 155,
157, CM160, 161, 170, C182, 191B, Korean
C105A, C105B, C105C, 130A, 130B, C149,
C151, 154, 155, CM160, 172, 177, 178, 180C,
181, 182, 183, 187, 191B, Theater 102A, (2)
two social sciences group 1 courses from Anthropology M145T, 163P, 163Q, 163R, Asian
American Studies 171A, 171B, 171C, Gender
Studies M170C, M173B, Geography 139, 158,
186, History 169B, 170B, 170D, 172C, 173A,
M173C, Political Science 135, 159A, 159B,
160, Sociology 181A, 181B, and (3) one additional elective course selected from the group
1 lists above or from the group 2 list below.
The area studies electives listed above (group
1) focus on contemporary issues of that region
after 1750. Students may substitute a maximum of one upper-division course with focus
on earlier historical aspects of the region or on
diasporas with origins related to the region toward the area studies additional elective category (item 3 above). The course may be selected from the following group 2 list: Anthropology 116Q, Art History C148A, C148B,
C148C, 152A, C152B, C152D, 154B, Asian
American Studies 111, 113, 121, 122B, 130A,
M130C, 131A, 131B, 131C, 132A, Chinese
C138, 140A through 140D, M153, C175, 182,
M183, 184, 186, 191A, History 152, 170A,
172B, Japanese 140A, 140B, 140C, C149,
165, 172, 191A, Korean 150, 175, 176, 180A,
180B, 184A, or 191A.

The European Studies minor is designed for
students who wish to augment their major with
concerted study of the history, culture, and society of Europe from an interdisciplinary and
modern perspective.
To enter the minor, students must be in good
academic standing (overall grade-point average of 2.0 or better) and have completed all
lower-division minor courses with a GPA of 2.0
or better in those courses.
Required Lower-Division Courses (13 to 15
units): International and Area Studies 1 and two
international societies and cultures courses from
Anthropology 3, Comparative Literature 1D (or
2DW or 4DW), Economics 1, 2, Ethnomusicology 5, 25, Geography 3, 4, 6, History 2B, 22,
Political Science 50 (or 50R), Sociology 1, World
Arts and Cultures 20, 33. Students may substitute one area studies preparation course (from
Comparative Literature 1C, 2CW, 4CW, Dutch
10, English 88G, French 12, 14, 14W, 41, 60,
German 50B, 57, 59, 61A through 61D, History
1C, 1CH, 97C, International and Area Studies
40, Italian 42B, 46, 50B, Portuguese 40A, Romanian 90, Russian 25, 25W, 30, 31, 32, 90B,
90BW, Scandinavian 50, 50W, Slavic 90, or
Spanish 42) toward the international societies
and cultures preparation requirement.
Required Upper-Division Courses (20 to 25
units): Five area studies group 1 courses as follows: (1) two humanities and arts group 1
courses from Art History 127B, M127C, Central and East European Studies 125, Comparative Literature C163, C164, Dutch 113, 131,
English 115B, 164A, 164B, 164C, 171B, 171C,
Ethnomusicology 133, Film and Television
106B, French 114C, 119, 120, 131, 132, 138,
139, M140, 141, German 102, 103, 104, 110,
112, 160, 161, 162, 164, 165, 166, 173, 174,
Italian 102C, 120, 121, 150, M158, Russian
107B, 120, 121, 122, M127, 128, 130A, 130B,
130C, 131, M132, 140A, 140B, 140C, Scandinavian C141A, 141C, CM144A, 155, 156, 157,
161, C163A, C163B, C163C, 173A, C174A,
174B, C180, Yiddish 131A, 131B, (2) two social
sciences group 1 courses from Economics
181, Geography 152, 183, History 120A
through 120D, 121D, 121E, 121F, 122F, 123B,
123C, 124B, 124C, 125B, 125C, 125D, 127B,
127C, 127D, 128C, 129B, 131A, 131B, 134B,
134C, 135C, 136B, 136C, 137A, 137B, 183A,
183B, Honors Collegium 173A, Political Science 127A, 128A, 128B, 153A, 156A, and (3)
one additional elective course selected from
the group 1 lists above or from the group 2 list
below.

The area studies electives listed above (group
1) focus on contemporary issues of that region
after 1750. Students may substitute a maximum of one upper-division course with focus
on earlier historical aspects of the region or on
diasporas with origins related to the region toward the area studies additional elective category (item 3 above). The course may be selected from the following group 2 list: French
114A, 114B, 115, 116, 117, 118, 169, German
169, 170, 171, 172, History 121A, 121B, 121C,
122A, 122B, 122C, 125A, 126, Italian 102A,
102B, 103A, 103B, 110, 113, 114A, 114B,
116A, 116B, 118, 119, 140, Political Science
111C, Russian C124C, C124D, C124G,
C124N, C124P, C124T, Scandinavian 142A,
143C, 152, or 154.
One upper-division language course (advanced level) may be applied to item 3 above
by petition to the chair of the program.
A minimum of 20 units applied toward the minor requirements must be in addition to units
applied toward major requirements or another
minor.
Each minor course must be taken for a letter
grade, and students must have an overall
grade-point average of 2.0 or better. Successful completion of the minor is indicated on the
transcript and diploma.

Latin American Studies Minor
The Latin American Studies minor is designed
for students who wish to augment their major
with concerted study of the history, culture,
and society of Latin America from an interdisciplinary and modern perspective.
To enter the minor, students must be in good
academic standing (overall grade-point average of 2.0 or better) and have completed all
lower-division minor courses with a GPA of 2.0
or better in those courses.
Required Lower-Division Courses (13 to 15
units): International and Area Studies 1 and
two international societies and cultures
courses from Anthropology 3, Comparative Literature 1D (or 2DW or 4DW), Economics 1, 2,
Ethnomusicology 5, 25, Geography 3, 4, 6,
History 2B, 22, Political Science 50 (or 50R),
Sociology 1, World Arts and Cultures 20, 33.
Students may substitute one area studies
preparation course (from Clusters 26A, History
8A, 8AH, 8B, 8C, 97E, International and Area
Studies 50, Portuguese 40B, 46, or Spanish
44) toward the international societies and cultures preparation requirement.
Required Upper-Division Courses (20 to 25
units): Five area studies group 1 courses as follows: (1) two humanities and arts group 1
courses from Art History C142A, C142B, 144,
Comparative Literature 177, English 135, Ethnomusicology 107, M108A, 108B, 161K (must
be taken twice to equal one 4-unit course),
Film and Television 106C, Portuguese 130A,
130B, 141B, 142A, 142B, Spanish 120, World
Arts and Cultures C139, (2) two social sciences
group 1 courses from African American Studies M154C, M154D, M178, Anthropology 161,
162, Chicana and Chicano Studies 111, 117,
M125, M132, C141, 143, 151, 169, Community


South Asian Studies Minor

The South Asian Studies minor is designed for students who wish to augment their major with concerted study of the history, culture, and society of South Asia from an interdisciplinary and modern perspective.

To enter the minor, students must be in good academic standing (overall grade-point average of 2.0 or better) and have completed all lower-division minor courses with a GPA of 2.0 or better in those courses.

Required Lower-Division Courses (13 to 15 units): International and Area Studies 1 and two international societies and cultures courses from Anthropology 3, Comparative Literature 1D (or 2DW or 4DW), Economics 1, 2, Ethnomusicology 5, 25, Geography 3, 4, 6, History 2B, 22, Political Science 50 (or 50R), Sociology 1, World Arts and Cultures 20, 33. Students may substitute one area studies preparation course (from Art History 31, History 9A, 97N, or South Asian M60) toward the international societies and cultures preparation requirement.

Required Upper-Division Courses (20 to 21 units): Five area studies group 1 courses as follows: (1) two humanities and arts group 1 courses from Ethnomusicology 161B (must be taken twice to equal one 4-unit course), South Asian 151, 162, 163, Comparative Literature 178, Ethnomusicology 146, 147, South Asian 150, 155, (2) two social sciences group 1 courses from Asian American Studies M172C, Gender Studies M164A, History 174B, 174C, 175A, 175C, and (3) one additional elective course selected from the group 1 list above or from the group 2 list below.

The area studies electives listed above (group 1) focus on contemporary issues of that region after 1750. Students may substitute a maximum of one upper-division course with focus on earlier historical aspects of the region or on diasporas with origins related to the region toward the area studies additional elective category (item 3 above). The course may be selected from the following group 2 list: Anthropology 116P, History 154A, 154B, Asian 164, American Studies M172A, 172B, History 174A, South Asian CM160, or 185. One upper-division language course (advanced level) may be applied to item 3 above by petition to the chair of the program.

Southeast Asian Studies Minor

The Southeast Asian Studies minor is designed for students who wish to augment their major with concerted study of the history, culture, and society of Southeast Asia—Brunei, Cambodia, East Timor, Indonesia, Laos, Malaysia, Myanmar (Burma), Philippines, Singapore, Thailand, and Vietnam—from an interdisciplinary and modern perspective.

To enter the minor, students must be in good academic standing (overall grade-point average of 2.0 or better) and have completed all lower-division minor courses with a GPA of 2.0 or better in those courses.

Required Lower-Division Courses (13 to 15 units): International and Area Studies 1 and two international societies and cultures courses from Anthropology 3, Comparative Literature 1D (or 2DW or 4DW), Economics 1, 2, Ethnomusicology 5, 25, Geography 3, 4, 6, History 2B, 22, Political Science 50 (or 50R), Sociology 1, World Arts and Cultures 20, 33. Students may substitute one area studies preparation course (from Art History 31, History 9A, 97N, or South Asian M60) toward the international societies and cultures preparation requirement.

Required Upper-Division Courses (20 to 21 units): Five area studies group 1 courses as follows: (1) two humanities and arts group 1 courses from Ethnomusicology 161B (must be taken twice to equal one 4-unit course), Southeast Asian 130, 135, 140, 157, Theater 102B, Vietnamese M155, 180B, (2) two social sciences group 1 courses from Asian American Studies M171D, 171E, Gender Studies M164A, History 176B, 176C, 176E, 177A, 177B, 185B, 185C, Political Science 158, and (3) one additional elective course selected from the group 1 list above or from the group 2 list below.

The area studies electives listed above (group 1) focus on contemporary issues of that region after 1750. Students may substitute a maximum of one upper-division course with focus on earlier historical aspects of the region or on diasporas with origins related to the region toward the area studies additional elective category (item 3 above). The course may be selected from the following group 2 list: Art History 156, Asian American Studies 111, 113, 121, 122B, 133, 134, History 152, 176A, or Vietnamese 180A.

One upper-division language course (advanced level) may be applied to item 3 above by petition to the chair of the program.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Study Abroad

All majors and minors are highly encouraged to study abroad. Students can travel to all areas through a variety of programs with various lengths (summer or during the academic year).

Students may partially fulfill the area studies elective requirement by participating in an International Institute Summer Travel Study program consisting of two courses in and on a particular region of the world. Contact the academic counselor for more information on available programs.

More information about travel abroad programs is available through the UCLA International Education Office, 1332 Murphy Hall, 310-825-4995, info@ieo.ucla.edu.

International and Area Studies

Lower-Division Courses

1. Introduction to International and Area Studies. (6) Lecture, three hours; discussion, one hour. Introduction to international and area studies from interdisciplinary framework, covering themes related to international politics and markets, as well as international societies and cultures, to illuminate and clarify profoundly international character of world we live in and to introduce set of contemporary issues and challenges that cross borders and affect every region of world. P/NP or letter grade.

M5A-M5B-M5C. Elementary Nahautl. (4-4-4) (Same as Chicana and Chicano Studies M5A-M5B-M5C and Indigenous Languages of the Americas M5A-M5B-M5C). Lecture, five hours. Course M5A is enforced requisite to M5B, which is enforced requisite to M5C. Introduction to Aztec language of central Mexico. Coverage of basic Nahautl grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grade.

10. Explorations in International Studies. (2) Lecture, two hours. Exploration of key international events through active learning, designed to develop understanding of international issues and diverse skill set, including persuasive speaking, critical thinking, and
research skills, problem solving, teamwork, expository writing, and leadership skills. May be repeated for credit without limitation. P/NP grading.

M15A-M15B-M15C. Intermediate Nahualt. (4-4-4) (Same as Chicana and Chicano Studies M15A-M15B-M15C and Indigenous Languages of the Americas M15A-M15B-M15C) Lecture, four hours. Enforced requisites: courses M5A, M5B, M5C. Course M15A is enforced requisite to M15B, which is enforced requisite to M15C. Taught primarily in Nahualt. Examination of Nahualt (Aztec) language of central Mexico at intermediate level. Coverage of Nahualt grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

31. Introduction to Southeast Asia. (6) Lecture, three hours; discussion, one hour (when scheduled). Interdisciplinary survey designed as introduction to modern Southeast Asia. P/NP or letter grading.

33. Introduction to East Asia. (5) Lecture, three hours; discussion, one hour (when scheduled). Interdisciplinary survey designed as introduction to modern East Asia. P/NP or letter grading.

40. Introduction to Europe. (5) Lecture, two hours; discussion, one hour (when scheduled). Interdisciplinary survey designed as introduction to modern Europe. P/NP or letter grading.

50. Introduction to Latin America. (5) Lecture, three hours; discussion, one hour (when scheduled). Interdisciplinary survey designed as introduction to modern Latin America. P/NP or letter grading.

Upper-Division Courses

110A-110B. Field Studies in International and Area Studies. (4-4) Seminar, three hours. Exploration of culture, economy, history, and politics of important locations around world. Hands-on experiential programs offered for students participating in UCLA Travel Study Program. Field trips included to gain first-hand experience. May be repeated with topic and/or location change. Offered in summer only. P/NP or letter grading.

160. Selected Topics in International and Area Studies. (4) Lecture, three hours; discussion, one hour (when scheduled). Examination of one or more topics related to international and area studies. May be repeated for credit with topic change. P/NP or letter grading.

188. Special Courses in International and Area Studies. (4) Seminar, three hours. Program-sponsored experimental or temporary courses, such as those taught by resident or visiting faculty members. May be repeated for credit with topic change. Letter grading.

191. Variable Topics Senior Research Seminars: International and Area Studies. (4) Seminar, three hours; discussion, one hour (when scheduled). Interdisciplinary survey designed as introduction to modern international and area studies majors. Organized on topics basis with readings, discussions, papers, and development of culminating project. May not be repeated for credit. Letter grading.

193. Colloquia and Speaker Series. (1) Seminar, two hours; discussion, two hours. Introduces to current scholarship in field of international and area studies. Attendance at selected presentations with required response papers. May be repeated for credit. P/NP grading.

195CE. Community or Corporate Internships in International and Area Studies. (4) Tutorial, to be arranged; fieldwork, eight to 10 hours. Limited to juniors/seniors. Internship in corporate, governmental, or nonprofit setting coordinated through Center for Community Learning. Students complete weekly written assignments, attend biweekly meetings with graduate student coordinator, and write final research paper. Faculty supervisor and graduate student coordinator construct series of reading assignments that examine issues related to internship site. May be applied toward major requirements. May be repeated for credit with consent of Center for Community Learning. Individual contract with supervising faculty member required. P/NP or letter grading.

198A-198B-198C. Honors Research in International and Area Studies. (4-4-4) Tutorial, to be arranged. Limited to international and area studies honors program students. May be repeated for credit. Individual contract required. Letter grading. 198A. Supervised individual research or investigation under guidance of faculty mentor. Development and planning of honors thesis. 198B. Enforced requisite: course 198A. Supervised individual research or investigation under guidance of faculty mentor. Continued development and refinement of honors thesis. 198C. Enforced requisite: course 198B. Final drafting and submission of completed honors thesis. Culminating paper of 35 to 50 pages required.

199. Directed Research in International and Area Studies. (4) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Culminating paper required. May be applied toward requirements via petition. May be repeated for credit. Individual contract required. Letter grading.

Graduate Course

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

INTERNATIONAL DEVELOPMENT STUDIES

Interdepartmental Program
College of Letters and Science

10359 Bunche Hall
Box 951487
Los Angeles, CA 90095-1487
310-825-5187
idps@international.ucla.edu
http://www.international.ucla.edu/institute/academics/ids/

Michael F. Lofchie, PhD, Chair

Faculty Committee
Andrew Apter, PhD (Anthropology, History)
Judith A. Carney, PhD (Environment and Sustainability, Geography)
Akhil Gupta, PhD (Anthropology)
Kevan K. Harris, PhD (Sociology)
Patrick C. Heuveline, PhD (Sociology)
Edmond Keller, PhD (Political Science)
Nancy E. Levine, PhD (Anthropology)
Michael F. Lofchie, PhD (Political Science)
David L. Rigby, PhD (Geography, Statistics)
Ananya Roy, PhD (Social Welfare, Urban Planning)
Eric S. Sheppard, PhD (Geography)

Scope and Objectives

The International Development Studies major familiarizes students with urgent global issues from a variety of disciplinary perspectives, including anthropology, economics, geography, history, political science, public health, and sociology. The purpose of the curriculum is to enable students to deepen their understanding of some of the most vital questions of our era: Why are the poor countries poor? Why are the rich countries rich? What can be done to enable poorer countries to become better off? To address these questions, students focus their studies on the challenges, opportunities, and concerns of the developing world, which includes the countries of Africa, Asia, Eastern Europe, Latin America, and the Middle East.

Undergraduate Study

The International Development Studies major is a designated capstone major. Students must complete an advanced seminar that provides unique opportunity to work closely with a faculty member on a focused topic of research. Students completing the capstone should be able to demonstrate skills and expertise acquired in earlier coursework; identify, analyze, and select relevant data from primary and secondary sources; acquire a working knowledge of broader scholarly discourse; conceive and execute an original research paper; and engage with a community of scholars, presenting their work to peers as well as providing feedback on peers’ work. The seminar culminates in a written paper or project and a formal class report.

International Development Studies BA

Capstone Major

Admission

Admission to the International Development Studies major is by application only. To be eligible to apply, students must have first completed all nolanguage preparation courses and the foreign language courses through at least level 3 (elementary level). Any remaining language courses may be completed after students have been accepted to the major. Each preparation for the major course must be taken for a letter grade, and students must have a UC grade-point average of 2.0 or better in those courses.

The application period is once per year, and students must apply no later than the end of fall quarter of their junior year.

Meeting the above minimums does not guarantee admission to the program. Admission is on a competitive basis, using the above qualifications as minimum standards for consideration.

International Development Studies Premajor

Incoming freshman and transfer students may be admitted as International Development Studies premajors on recommendation to UCLA. Premajors must apply for major standing at the end of fall quarter of their junior year; they are not automatically accepted into the major.

Preparation for the Major

Required: (1) Two courses from Economics 1, 2, Geography 4; (2) one statistics course from Economics 41, Political Science 6, 6R, Statistics 10, or 12; (3) three social sciences/area studies courses, each from a different category, selected from (a) Anthropology 3, (b) Gender Studies 10, (c) Geography 3, 5, 6, (d) Global Studies 1, (e) History 8A, 8B, 8C, 9A, 9D, 9E, 10B, 10BW, 11B, 22, International and
Refer to the UCLA in one modern foreign language.

cultural area studies, world history, compara-

tropicology, cultural or economic geography,

ies 110, M120, 130, 191; (2) one

Required: senior seminar 191 course.
courses must be taken prior to the capstone
courses for up-to-date information regarding transfer

Refer to the UCLA Transfer Admission Guide

The Major

each course must be taken for a letter grade.
Students must earn a grade of C or better in

each course must be taken prior to the capstone

Required: (1) International Development Stud-
ies 110, M120, 130, 191; (2) one research

course from Anthropology 138P,
Asian American Studies 103, 104A, 105, M108,
C142A, 142D, 187A, 191A, Chicana and Chica-
cano Studies M119, 123, 129, Economics 103,
Education C126, Geography 163, Political Scien-
tce 170A, Sociology 106A, 110, 113, Statistics
23, Urban Planning M122; (3) three social
and critical theory courses, each from a differ-
ent department, from Anthropology 130, 140,
143, 146, 147, Economics 111, 112, Environ-
ment M132, M133, M161, Gender Studies 168,
Geography 110, M115, M128, 132, 133, 140,
142, 148, 155, Political Science 122A, M122B,
124A, 150, 167D, 168, Sociology 101, M115,
116, 182, 183, 191D, Urban Planning 121,
CM166; (4) two regional courses, either from
the same or separate developing regions of the
world (East Asia and East Central Asia, Eastern
Europe and West Central Asia, Latin America
and Caribbean Basin, Middle East and North
Africa, South and Southeast Asia and Pacific
Islands, Sub-Saharan Africa) and one discip-
inary elective listed below:

East Asia and East Central Asia: Anthropology
163P, Asian American Studies 171A, 171C,
Chinese 152, Communication 183, Gender
Studies M170C, Geography 186, History 168B,
170B, 170D, Korean C151, 155, 190C, Political
Science 135, 159A, 159B, So-
ciology 181A.

Eastern Europe and West Central Asia: Anthrop-
ology 163Q, Central and East European Studies
125, 126, Czech 155, Gender Studies M127,
History 107C, 107E, 120A through
120D, 127B, 127C, Political Science 128B,

Honors Program

Majors who have completed International De-
v elopment Studies 110, M120, and 130 and
who have a 3.5 grade-point average in all
courses offered for the major are eligible to for-

Honor in completing all courses required for the major,
students must take courses 198A, 198B, and
198C, in which they research, write, and present an
honors thesis. To receive honors at gradua-
tion, students must have at least a 3.5 GPA in
courses applied toward the major (including
198A, 198B, 198C) and an overall GPA of 3.0.

Highest honors are awarded to students who
complete the major (including courses 198A,
198B, 198C) with a 3.75 GPA and who pro-
duce an exceptional thesis.

Study Abroad
International Development Studies majors are
highly encouraged to study abroad in develop-
ing areas of the world. Students can do so
through a variety of programs with various
lengths (summer or during the academic year).

More information about travel abroad pro-
grams is available through the UCLA Interna-
tional Education Office, 1332 Murphy Hall,
310-825-4995, info@ieo.ucla.edu.

International Development

Upper-Division Courses

(4) Formerly numbered 100A. Lecture, three
hours; discussion, one hour (when scheduled).

120. Political Economy of Development. (4)
Formerly numbered 100B. (Same as Political
Science M17C). Lecture, three hours; discussion,
one hour (when scheduled). Political economy
approach to puzzle of why some countries are rich and others
are poor and why, among latter, some have been able to
achieve rapid rates of economic growth and others have
not. Explanation and review of logic behind major
important arguments that have been advanced to ac-
count for differences across countries in rates and
levels of economic development. Letter grading.

130. Economics of Developing Countries. (4)
Formerly numbered 150.) Lecture, three hours; discus-
sion, one hour. Economic analysis of developing
countries, issues underlying causes of underdevelop-
ment and process of development. Topics include
population growth, poverty, inequality, inflation, fiscal
trade and monetary policy, and alternative develop-
ment strategies. Letter grading.

160. Selected Topics in International Development
Studies. (4) Lecture, three hours; discussion, one
hour (when scheduled). Examination of one or more
topics related to international development. May be
repeated for credit with topic change. P/NP or letter
grading.

188. Special Courses in International Development
Studies. (4) Seminar, three hours. Program-spon-
sored experimental or temporary courses on selected
contemporary topics in international development
taught by visiting instructors or affiliated faculty
members. May be repeated for credit with topic change.
P/NP or letter grading.

191. Variable Topics Research Seminars: Interna-
tional Development Studies—Senior Seminar. (4)
Seminar, three hours. Requisites: courses 110, M120,
130. Limited to senior International Development
Studies majors. Organizes and explores topics basis with read-
ings, discussions, papers. May not be repeated for
credit. Letter grading.

192. Undergraduate Practicum in International De-
velopment Studies. (2) Seminar, two hours; practi-
cum, to be arranged. Limited to juniors/seniors.
Training and supervised practicum for advanced un-
dergraduate students to serve as undergraduate
course assistants in international development
studies courses. Students assist in preparation and
presentation of materials and development of innova-
tive programs with guidance of faculty members.
Consult academic counselor for further information.
May not be applied toward major requirements. May
be repeated for credit. P/NP grading.

193. Colloquia and Speaker Series. (1) Seminar,
two hours. Introduction to current scholarship in field
of international development studies or of topics re-
lated to guest speaker series. May be repeated for
credit. P/NP grading.

194. Research Group Seminar. (2) Seminar, three
hours. Designed to encourage participation and stim-
ulation of student research in specific research areas for under-
graduate students who are part of departmental re-
search group or internship. Discussion of research
methods and current literature in field of international
development studies or of research of faculty members or
students. May be repeated for credit. P/NP grading.

198A-198B-198C. Honors Research in Internation-
al Development Studies. (4-4-4) Tutorial, to be
arranged. Preparation: 3.5 grade-point average in
courses for major, formal application to honors pro-
gram. Requisites: courses 110, M120, 130. Limited to

Area Studies 31, 50, (f) Political Science 20, 50,
50R, (g) Sociology 1; and (4) demonstrated
proficiency in one modern foreign language

Latin America and Caribbean Basin: African
American Studies M154C, M178, Anthropol-
yogy 161, 162, Art History C142B, Chicana and
Chicano Studies M125, M126, M144, CM147,
Community Health Sciences 132, Gender
Studies M144, M147C, Geography 114, 181,
162A, 162B, 162C, Honors Collegium M145,
Political Science 124C, 154A, 154B, M184A,
Sociology M178, 186.

Middle East and North Africa: Anthropology
M166Q, 167, History 105C, M108C, 111C,
Honors Collegium M157, Political Science

South and Southeast Asia and Pacific Islands:
Anthropology 168P, Asian American Studies
122A, 122B, M164, 171D, 171E, 173G, Gender
Studies M164A, Geography 185, History
M144C, 174B, 174C, 175A, 175C, 176B,
176C, 176D, 177A, 177B, Political Science
158, Southeast Asian 135, 157, Vietnamese
M155, 180B.

Sub-Saharan Africa: Anthropology 166P, Art
History C145A, C145B, Comparative Literature
169, Geography 122, 135, History 164B
through 164E, 166B, 167A, 167B, 167C, 168B,
Political Science 151A, 151B, 151C.

Disciplinary Electives: Anthropology M145R,
M148, Economics 121, 122, 137, 150, 151, Edu-
cation M108, Environment 186, Film and Tele-
vision 106C, 112, Gender Studies M154Q,
M155Q, Geography M109, 147, M153, 159C,
History 131A, Honors Collegium M152, Politi-
cal Science 116A, 123A, 126, 137A, Sociology
154, M175, 191F, World Arts and Cultures
102A, 144.

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199. Directed Research in International Development Studies. (4) Tutorial, to be arranged. Limited to junior/senior International Development Studies majors. Supervised intensive directed research program in which students conduct interdisciplinary research under guidance of faculty mentor. Cursing paper required. May be applied toward major via petition. May not be repeated. Individual contract required. Letter grading.

Graduate Course

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

INTERNATIONAL MIGRATION STUDIES

Interdisciplinary Minor
College of Letters and Science

11248 Bunche Hall
Box 951487
Los Angeles, CA 90095-1487

http://www.international.ucla.edu/migration/home

Roger Waldinger, PhD, Chair

Faculty Committee
Laurie K. Hart, PhD (Anthropology)
Rubén Hernández-León, PhD (Sociology)
Hiroshi Motomura, JD (Law)
Marjorie Faulstich Orellana, PhD (Education)
Roger Waldinger, PhD (Sociology)

Scope and Objectives

The minor in International Migration Studies orients students toward comparative, historical, and international dimensions, providing structured exposure to the relevant scholarship.

International migration is a global phenomenon—comprising broad and deep linkages within and between the developed and developing worlds. As the issues surrounding global migration processes cross manifold intellectual boundaries, understanding demands insights and methods from a broad array of disciplines. Standard models in economics or demography offer powerful explanations of why people migrate and how migration might have an effect on wages and employment in both sending and receiving societies. However, migration is ultimately about the lived experience of people—those moving and those they encounter. Understanding migrants’ emergent identities and the problems of belonging and acceptance that migration generates requires attention, both to the micro level, as well as to the specific historical and cultural contexts surrounding both migration flows and societal responses. The minor in International Migration Studies aims to build an appreciation of international migration and its dilemmas as it draws on the insights generated from a broad array of disciplines and methodological approaches needed for grappling with a vast social and intellectual phenomenon.

Undergraduate Study

International Migration Studies Minor

Required Upper-Division Courses (28–32 units): (1) one core course: Sociology 151 or 152; (2) four elective courses, from at least two departments, selected from Asian American Studies M130C, M166A, 167, Chicano and Chicano Studies 120, M124, M126, 164SL, C179, Economics 103, 151, English 134, German 175, History 145A, 146B, 146C, Political Science 143C, M181B, Psychology 129C, 133G, Slavic CM114, Sociology 116, 154, 156, Urban Planning 141; (3) two courses, International Migration Studies 155 and 199, to include an advanced theory course, and a thesis tutorial culminating in a thesis. Students who take both core courses may apply the second course toward the elective requirement. This minor culminates in a thesis. A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor. Each minor course must be taken for a letter grade of C– or better. Successful completion of the minor is indicated on the transcript and diploma.

International Migration Studies

Upper-Division Courses


193. Colloquia and Speaker Series. (2) Seminar, two hours. Introduction to current scholarship in field of international migration studies. Attendance at selected presentations with required response papers. May be repeated for credit. P/NP grading.


ISLAMIC STUDIES

See Near Eastern Languages and Cultures

ITALIAN

College of Letters and Science

212 Royce Hall
Box 951535
Los Angeles, CA 90095-1535
310-825-1940
http://www.italian.ucla.edu

Thomas J. Harrison, PhD, Chair

Professors
John A. Agnew, PhD
Massimo Ciavolella, PhD (Franklin D. Murphy Professor of Italian Renaissance Studies)
Thomas J. Harrison, PhD
Lucia Re, PhD, Dottore in Lettere
Stefania Tutino, PhD

Professors Emeriti
Michael J.B. Allen, PhD, DLitt
Luigi Ballerini, Dottore in Lettere
Franco Betti, PhD
Marga Cottino-Jones, PhD, Dottore in Lettere
Edward F. Tuttle, PhD

Associate Professor
Peter J. Stacey, PhD

Assistant Professor
Andrea Moudarres, PhD

Senior Lecturer SOE
Elissa A. Tognozzi, PhD

Lecturer
Hoang T. M. Truong, PhD

Scope and Objectives

Italian art and letters provide an invaluable key to understanding many facets of European civilization. Examined in its own right or studied comparatively, Italian culture offers unmatched rewards. The Department of Italian faculty members view transmitting the Italian language as inseparable from transmission of the culture, so students consider in depth virtually all aspects of Italian civilization. After their linguistic initiation, ideally including a year abroad, students may pursue advanced studies in the department exclusively and through a wide range of interdisciplinary programs. Bachelor of Arts degrees are offered in Italian and in Italian and Special Fields. Graduate study leads to the Master of Arts degree in Italian (with specializations in literature and language) and to the PhD (literature specialization).

Undergraduate Study

The Italian and Italian and Special Fields majors are designated capstone majors. Students are required to conceptualize, design, and complete an interdisciplinary research project or thesis. Through the capstone experience, students demonstrate their mastery of an area of Italian culture, as well as their skills in identifying and analyzing primary sources, integrating what they have learned in the course of their major studies, and presenting their work.
to peers under the guidance of a faculty mentor who facilitates discussion and peer review.

**Italian BA**

**Capstone Major**

The program of studies leading to the Bachelor of Arts in Italian consists of two distinct phases: preparation in the language and study of the literature and culture. While literature courses constitute the bulk of the program, good knowledge of the language is requisite to most upper-division literature courses credited toward the major in Italian. The uniqueness of Italian is stressed at all levels of study. Detailed information on programs and specific degree requirements is available from the department.

**Preparation for the Major**

*Required:* Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 42C, 46, 50A, or 50B.

**Transfer Students**

Transfer applicants to the Italian major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of Italian and one Italian civilization or culture course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

**The Major**

*Required:* Ten upper-division Italian courses, including 100, 199B (senior capstone course), one medieval to 18th century course from 113 through 118, one Enlightenment to contemporary course from 119 through 125, and six elective courses from 103A through 191. With consent of the undergraduate adviser, students may substitute up to one each of Italian 195 and 199A and an upper-division elective course from outside the department.

Majors who select courses taught in English must do additional work from the original Italian texts in consultation with the course instructor.

**Italian and Special Fields BA**

**Capstone Major**

Students with special interests or professional goals may select the Italian and Special Fields major, with coursework divided between Italian and a collateral field. Study programs fulfilling requirements for the major have been developed with the departments and programs listed below.

Majors who select courses taught in English must do additional work from the original Italian texts in consultation with the course instructor.

**Transfer Students**

Transfer applicants to the Italian and Special Fields major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of Italian and related courses in civilization, culture, history, linguistics, literature, and closely related languages.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

**Anthropology Field**

**Preparation for the Major**

*Required:* Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 42C, 46, 50A, 50B; Anthropology 2 or 3, and 4.

**The Major**

*Required:* Italian 100, 199B (senior capstone course), and three courses from 103A through 191 selected in consultation with the undergraduate adviser; five courses from Anthropology 100, 111, 130, 136A, 136B, 137P, 137Q, 138B, 140, 143, M145P, M145Q, 147, M150, 151 selected in consultation with the undergraduate adviser.

**Art History Field**

**Preparation for the Major**

*Required:* Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 42C, 46, 50A, 50B; Art History 20 or 21, 22, 23.

**The Major**

*Required:* Italian 100, 199B (senior capstone course), and three courses from 103A through 191 selected in consultation with the undergraduate adviser; five courses from Art History M113A, M113B, M113C, CM115A through 115E, 121A through 121D, C125A, 127A, 127B, 130, 132, 185 selected in consultation with the undergraduate adviser.

**Classics Field**

**Preparation for the Major**

*Required:* Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 42C, 46, 50A, 50B; Classics 10 or 20, 40W or 41W, and Greek 1, 2, 3 or Latin 1, 2, 3, or equivalent.

**The Major**

*Required:* Italian 100, 199B (senior capstone course), and three courses from 103A through 191 selected in consultation with the undergraduate adviser; Greek 100 or Latin 100, two courses from Classics 141 through 197, and two courses from Greek 101A through 133 or Latin 101 through 133 (graduate seminars may be substituted for upper-division author courses) selected in consultation with the undergraduate adviser.

**English Field**

**Preparation for the Major**

*Required:* Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 42C, 46, 50A, 50B; English Composition 3, English 4W, 10A, 10B, 10C.

**The Major**

*Required:* Italian 100, 199B (senior capstone course), and three courses from 103A through 191 selected in consultation with the undergraduate adviser; five courses from English 100 through 113A, 114 through 135, 139 through 183C selected in consultation with the undergraduate adviser.

**Film and Television Field**

**Preparation for the Major**

*Required:* Italian 1, 2, 3, 4, 5, 6, 46.

**The Major**

*Required:* Italian 100, 199B (senior capstone course), and three courses from 103A through 191 selected in consultation with the undergraduate adviser; five courses from Film and Television 106B, 106C, 107, 108, 112, 113, 114 selected in consultation with the undergraduate adviser.

**French Field**

**Preparation for the Major**

*Required:* Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 42C, 46, 50A, 50B; French 1, 2, 3, 4, 5, 6, and 12 or 14.

**The Major**

*Required:* Italian 100, 199B (senior capstone course), and three courses from 103A through 191 selected in consultation with the undergraduate adviser; five courses from French 108 through 172 selected in consultation with the undergraduate adviser.

**Gender Studies Field**

**Preparation for the Major**

*Required:* Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 42C, 46, 50A, 50B; Gender Studies 10.

**The Major**

*Required:* Italian 100, 199B (senior capstone course), and three courses from 103A through 191 selected in consultation with the undergraduate adviser; five courses from Gender Studies 102 through M191E selected in consultation with the undergraduate adviser.

**History Field**

**Preparation for the Major**

*Required:* Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 42C, 46; one course from History 1A, 1B, 1C, 20, 21, 22.

**The Major**

*Required:* Italian 100, 199B (senior capstone course), and three courses from 103A through 191 selected in consultation with the undergraduate adviser; five courses from History 100 through 188 selected in consultation with the undergraduate adviser.

**Linguistics Field**

**Preparation for the Major**

*Required:* Italian 1, 2, 3, 4, 5, 6, Linguistics 20, and three terms of a second foreign language other than Italian.

**The Major**

*Required:* Italian 100, 199B (senior capstone course), and three courses from 103A through 191 selected in consultation with the undergraduate adviser; Linguistics 103, 120A, 120B, and two courses from 110 through 191B selected in consultation with the undergraduate adviser.
Music History Field
Preparation for the Major
Required: Italian 1, 2, 3, 4, 5, 6, two courses from Music History M10A, M10B, M10C.

The Major
Required: Italian 100, 199B (senior capstone course), and three courses from 103A through 191 selected in consultation with the undergraduate adviser; five courses from Music History 135A, 135B, 135C, 191A through 191G selected in consultation with the undergraduate adviser.

Philosophy Field
Preparation for the Major
Required: Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 42C, 46, 50A, 50B; one course from Philosophy 1 through 31.

The Major
Required: Italian 100, 199B (senior capstone course), and three courses from 103A through 191 selected in consultation with the undergraduate adviser; two courses from Philosophy 100A, 100B, 100C, and three courses from M101A through 191 selected in consultation with the undergraduate adviser.

Political Science Field
Preparation for the Major
Required: Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 42C, 46, 50A, 50B; Political Science 10, 20, 30, 40, 50.

The Major
Required: Italian 100, 199B (senior capstone course), and three courses from 103A through 191 selected in consultation with the undergraduate adviser; five courses from Political Science M105 through 179 selected in consultation with the undergraduate adviser.

Portuguese Field
Preparation for the Major
Required: Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 46, 50A, 50B, Portuguese 1, 2, 3, 5, 25 (or 26 or equivalent as determined by placement test), 46.

The Major
Required: Italian 100, 199B (senior capstone course), and three courses from 103A through 191 selected in consultation with the undergraduate adviser; five courses from Portuguese 130A through 191 selected in consultation with the undergraduate adviser.

Spanish Field
Preparation for the Major
Required: Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 46, 50A, 50B; Spanish 1, 2, 3, 4, 5, 25 (or equivalent as determined by placement test), 42 or 44.

The Major
Required: Italian 100, 199B (senior capstone course), and three courses from 103A through 191 selected in consultation with the undergraduate adviser; Spanish 120 and four courses from 130 through 191B selected in consultation with the undergraduate adviser.

Theater Field
Preparation for the Major
Required: Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 42C, 46, 50A, 50B.

The Major
Required: Italian 100, 199B (senior capstone course), and three courses from 103A through 191 selected in consultation with the undergraduate adviser; Theater 101A, 101B, and three courses from 102A through 1114 selected in consultation with the undergraduate adviser.

Study in Italy
Students are encouraged to spend up to one year in Italy either to (1) study with an education abroad program or (2) study in an Italian university. They are also urged to take advantage of summer language workshops and study programs, including UCLA programs in Italy and Los Angeles. For additional information, contact the Education Abroad Program, 1332 Murphy Hall, or the Summer Sessions office, 1331 Murphy Hall.

Honors Program
Admission
The honors program provides exceptional students an opportunity for advanced research and study, under the guidance of a faculty member, that leads to the completion of an honors thesis. Majors in Italian and in Italian and Special Fields with an overall grade-point average of 3.25 and a 3.5 GPA or better in Italian courses are eligible to participate in the honors program. Applications should be made during the last term of the junior year or early in the senior year. Contact the department adviser for more information.

Requirements
To qualify for graduation with honors, Italian majors must complete all requirements for the major and Italian 198 in the last term of the senior year in which they write a 15- to 20-page thesis in Italian on a subject expanding on one of the upper-division courses they have taken. The thesis is written under the guidance of a departmental faculty member.

To qualify for graduation with honors, Italian and Special Fields majors must complete all requirements for the major and Italian 198 in which they write a 15- to 20-page thesis in Italian that combines their two disciplines of study. The thesis is written under the guidance of a departmental faculty member.

Successful completion of the honors program is indicated on the transcript and diploma.

Italian Minor
To enter the Italian minor, students must have an overall grade-point average of 2.0 or better.

Required Lower-Division Courses (12 units): Italian 5, 6, and one course from 42A, 42B, 46, 50A, 50B.

Required Upper-Division Courses (20 units): Italian 100 and four additional Italian courses. Three of the four courses must be taught in Italian.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of Italian offers Master of Arts (MA), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Italian.

Italian

Lower-Division Courses
1. Elementary Italian—Beginning. (4) Lecture, five hours. P/NP or letter grading.


8A-8B-8C. Italian Conversation. (2-2-2) Seminar, three hours. Enforced requisite for course 8A: course 2; for 8B: course 3; for 8C: course 4. Each course may be repeated once for credit. P/NP or letter grading.

9. Intensive Italian. (12) Lecture, 20 hours. Intensive language program equivalent to first year of college Italian (courses 1, 2, 3) and designed to develop basic language skills. Offered in summer only, P/NP or letter grading.

42A. Italy through Ages in English: Saints and Sinners in Early Modern Italy. (5) Lecture, four hours; discussion, one hour. Examination of issues of cultural hegemony, political and religious freedom, and doctrinal conflict through Italy’s early modern literary and artistic production. Texts may include Dante’s Divine Comedy, Boccaccio’s Decameron, Saint Catherine’s letters, Machiavelli’s The Prince, and Galileo’s
scientific writings. Artists may include those of Raphael and Michelangelo, as well as Benvenuto's sculptures. P/NP or letter grading.

42B. Italy through Ages in English: Modern and Contemporary Italy. (S) Lecture, four hours; discussion, one hour. Cultural and political developments from 18th century to present. Topics include: the political and social impact of Mussolini and Fascism; the role of Communism in Italian Catholicism; Berlusconi and media; migration and today's multiethnic Italy. Assigned works include relevant literature and memoirs, music, and film, futureist and fascist art, and organized crime fiction and film. P/NP or letter grading.

42C. Italy through Ages in English: Food and Literature in Italy. (S) Lecture, four hours; discussion, one hour. Course examines how food and literature reflect and change over time, in the context of social, historical, and political developments. Emphasis on discovering the power of food and literature to influence our thinking and perspectives for the future. P/NP or letter grading.

46. Italian Cinema and Culture in English. (S) Lecture/cinema, four hours; discussion, one hour. Special topics in Italian culture as reflected and reinforced by the nation's prime artform, stressing aesthetics and ideology of films, contemporary Italian history, and current political and cultural developments. Related topics include sex and politics, comedy, integration, family networks, and neorealism. P/NP or letter grading.

50A-50B. Masterpieces of Italian Literature in English. (5-5) Lecture, four hours; discussion, one hour. These courses are designed for students with no previous study of Italian literature who wish to study a major work of Italian literature. Topics include: Boccaccio, Petrarca, Torquato Tasso, Machiavelli, Castiglione, Ariosto, and Tasso.

50B. Enlightenment to Postmodernity. Comparative study of major literary texts and their adaptations into different forms of public spectacle, including theatre, opera, film, television, and comic strips. Emphasis on pivotal texts by Machiavelli, Aretino, Alfieri, Gozzi, Mascheroni, Verga, Puccini, Pirandello, Calvino, Orsete, Zavattini, de Sica, and Taviani Brothers. Emphasis on development of ideas of modernity and censorship in the modern world. P/NP or letter grading.

77. Encounters between Christianity, Islam, and New Worlds in Age of Discovery. (S) Lecture, four hours; discussion, one hour. Examination of cultural, religious, and racial differences in early modern world of Italy, Spain, and Ottoman Empire. Materials include films, artworks, Dante's Divine Comedy, Qur'an, Arab chronicles of Crusades, travel logs and letters of Christopher Columbus, Italian Renaissance epic poetry, and anticolonial polemics. P/NP or letter grading.

Upper-Division Courses


102A-102B-102C. Italian Cultural Experience in Italy. (4-4-4) Lecture, four hours; discussion, one hour. Cultural and political developments in their historical context and in comparison to other cultural developments. Representative authors may include Saint Francis of Assisi, Dante, Petrarch, Boccaccio, Saint Catherine of Siena, Machiavelli, Giotto, Botticelli, Michelangelo, Leonardo, Caravaggio, Gaspara Stampa, Veronica Franco, Ariosto, Tasso, and Galilei. P/NP or letter grading.

102B. Introduction to Modern Italian Literary and Cultural Studies. (4) Lecture, three hours. Enforced requisite: course 100. Taught in Italian. Selected modern works of Italian literature, theater, art, and culture from Enlightenment to present. Emphasis on critical methods and skills through analyzing and interpreting a wide range of Italian texts and cultural formations in their historical context and in comparison to contemporaneous cultural views. Representative authors may include Vico, Goldoni, Alfieri, Beccaria, Rosalba Carriera, Piranesi, Tiepolo, Leopardi, Manzoni, Pirandello, Aleramo, Marinetti, Bocconici, Modigliani, De Chirico, Calvino, Orsete, Pasolini, Franco Rame, and Dario Fo. P/NP or letter grading.

104. Dante in English. (4) Lecture, three hours. Close study of one of world's greatest literary geniuses, particularly of his masterpiece, Divine Comedy, the archetypal medieval journey through the afterworld. P/NP or letter grading.

104A. Dante’s La Divina Commedia. (4) Lecture, three hours. Enforced requisite: course 100. Taught in Italian. Study of medieval philosophy, religion, and politics. Selections include the central issue of political and religious achievement of the age. P/NP or letter grading.

112-114A. Middle Ages. (4-4) Lecture, three hours. P/NP or letter grading. 114A. Travel from Love to Sacred by Dante, Dolce Stil Novo poets, and Petrarca caught between courtly and religious codes. 114B. Medieval Moralism, Moralism, and Society Novely of Boccaccio's witty and comic masterpiece, Decameron, analyzed within context of moral and social codes of culture of time.

116-118B. Italian Renaissance. (4-4) Lecture, three hours. P/NP or letter grading. 116B. Study of one of world's greatest literary geniuses, particularly of his masterpiece, Divine Comedy, the archetypal medieval journey through the afterworld. P/NP or letter grading.

119B. Italian Enlightenment. (4) Lecture, three hours. Study of philosophical and political prose, satirical poetry, and drama in 18th-century Italy. Readings by Vico, Metastasio, Parini, and Alfieri. P/NP or letter grading.

120. Modern and Contemporary Literature. (4) Lecture, three hours. Analysis of novels, short stories, and one-act plays as vehicles for perfection of pronunciation, comprehension, and fluency. P/NP or letter grading.

121. Literature and Film. (4) Lecture, three hours. Comparative study of specific literary works and their adaptation into film and of different techniques in two media. Readings include novels of modern and contemporary thought, politics, and culture. Authors may include D’Annunzio, Aleramo, Pirandello, Ungaretti, Montale, Pasolini, Orsete, Morante, Ginzburg, Calvino, Fo, Eco, Celati, and Tabucchi. P/NP or letter grading.

122. Italian Theater. (4) Lecture, three hours. Study of major love poets of all time. Readings include realist novels and short stories by Manzoni, Verga, and Deledda and opera, and modern modes of expression. Texts include literary works, screenplays, and works on literature and film theory. P/NP or letter grading.

126. Italian Theater. (4) Lecture, three hours. Study of major love poets of all time. Readings include realist novels and short stories by Manzoni, Verga, and Deledda and opera, and modern modes of expression. Texts include literary works, screenplays, and works on literature and film theory. P/NP or letter grading.

130. Women, Gender, and Sexuality in Italian Culture. (Same as Gender Studies M158.) Lecture, three hours; discussion, one hour. Analysis of gender roles, images of femininity and masculinity, patriarchy, myths of Madonna and Virgin lover, conditions of women in Italian society through history, politics, literature, film, and other media. Italian majors required to read texts in Italian. P/NP or letter grading.

132. Modern Italian Cultural Studies. (4) Seminar, three hours. Reading, research, and writing on various cultural aspects of modern and contemporary Italy. Emphasis on historical context of cultural, fashion, and design, and anthropology, photography and visual arts, mass media, politics, music, and sports. P/NP or letter grading.

144. Food and Literature in Italy. (4) Lecture, three hours. Profile of Italian history and culture through analysis of gastronomic documents, food traditions, and literary and visual works. Emphasis on local Milanese, Renaissance food, gastronomic and modern and contemporary movements such as Cucina futurista and slow food. Examination of relations of Italian traditions of food and eating with health, body, gender, community, politics, food, biodiversity, and environment. P/NP or letter grading.

146. Italian through Opera. (4) Lecture, three hours. Requisite: course 6. Taught in Italian. Introduction to traditional Italian opera as means of appreciating culture of Italy, art form of opera, and study of Italian language at advanced level through reading of libretti. Six masterworks of Italian opera tradition—Il Barbiere di Siviglia, La Bohéme, Pagliacci, Tosca, and La Traviata—will be examined in terms of their cultural and historical contexts to learn about operas, their characters, plots, settings, and themes. Exploration of various historical, political, and cultural issues raised in each opera. P/NP or letter grading.


140. Italian Novella from Boccaccio to Basile in Translation. (4) Lecture, three hours. Analysis of de-Italianization of the National Novel as the historical context, and folk material. Special emphasis on how Italian novella influenced other European literatures. P/NP or letter grading.


151. Italy and Asia. (4) Lecture, three hours. Examination of portrayals of Asian culture in Italy and Italian culture in Asia, and ways in which Asia and Italy view each other through each other's eyes. Focus on modern and contemporary literature and visual art. Discussion of how Italy has evolved from relatively homogeneous society into multicultural country that includes growing Asian and Asian-Italian population, P/NP or letter grading.

152. Italy between Europe and Africa. (4) Lecture, three hours. Knowledge of Italian or background in Italian studies not required. Analysis and critical discussion of works by Italian, northern European, and African writers (including travelers and migrants) who from 18th century to present have seen or experienced Italian peninsula and islands as bridge between Europe and Africa, or mix of both. Readings include works by northern European and African authors about Italy, and Italian authors about Africa and southern Italy. P/NP or letter grading.

M158. Women, Gender, and Sexuality in Italian Culture. (Same as Gender Studies M158.) Lecture, three hours; discussion, one hour. Analysis of gender roles, images of femininity and masculinity, patriarchy, myths of Madonna and Virgin lover, conditions of women in Italian society through history, politics, literature, film, and other media. Italian majors required to read texts in Italian. P/NP or letter grading.

180. History of Italian Language. (4) Lecture, three hours. Study of major Italian particles that have shaped Italian or standard Italian, and specialization in the development of Italian language. Tracing of its changing relations with other
European languages and survey of effects wrought by historical events, changes in taste, and altered social functions. P/NP or letter grading.

191. Variables Topics Research Seminars: Italian Studies. (4) Seminar, three hours. Research seminar with focus on new or emerging themes in Italian literature covered in regular departmental undergraduate courses. Reading, discussion, and development of a project. May be repeated once for credit. P/NP or letter grading.

195. Community or Corporate Internships in Italian. (4) Tutorial, three hours. Limited to juniors/seniors. Internship in supervised setting in community agency or business. Students meet on regular basis with instructor and provide periodic reports of their experience. May be repeated for credit. Individual contract with supervising faculty member required. P/NP or letter grading.

198. Honors Research in Italian. (4) Tutorial, one hour. Limited to juniors/seniors. Development and completion of significant research project under direct supervision of faculty member. May be repeated for credit. Individual contract required. Letter grading.

199A. Directed Research in Italian. (2 to 4) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199B. Directed Capstone Research in Italian and Italian and Special Fields. (4) Tutorial, to be arranged. Requisites: courses 100 and at least four required courses for the major. Limited to senior Italian and Italian and Special Fields majors. Supervised individual research under guidance of faculty mentor. Capstone tutorial in which interdisciplinary paper (20 to 25 pages) written in either Italian or English that requires students to synthesize their knowledge of Italian or Italian and one special field of study. Individual contract required. Letter grading.

Graduate Courses


205. Studies in Criticism and Theory. (4) Seminar, three hours. History, theory, and practice of criticism. Presentation, discussion, and application of fundamental concepts in a critical perspective from Plato and Aristotle to present, including thematic and genre criticism, poststructuralist approaches, and feminist criticism.

210. Studies in Early Italian Literature. (4) Lecture, three hours. Topics include origins of Italian language and study of early texts, Scuola Siciliana and early poetry of Central and Northern Italy, and Dolce Stil Novo. S/U or letter grading.

214A-214F. Studies in Medieval Literature. (4 each) Lecture, three hours. S/U or letter grading: 214A. La Divina Commedia. 214B. Dante’s Other Works. 214C. Petrarcha’s Canzoniere. 214D. Boccaccio’s Decameron. 214E. Boccaccio’s Other Works. 214F. Variable Topics. Variable-content seminar on themes and issues of medieval literature, with coverage of authors such as St. Francis of Assisi or Jacobone. S/U or letter grading.


216A. Italian Literature of the 17th Century. (4) Lecture, three hours. Topics include Galileo and birth of scientific prose, Giordano Bruno, Gian Battista Marino, and baroque poetry. S/U or letter grading.


221A-221E. Seminars: Baroque. (4-4-4) Seminar, three hours. Each course (200, 250, 260) offers opportunity to study selected authors such as Vico or Ludovico. S/U or letter grading.

223. Structures of Modern Italian. (4) Lecture, three hours. Analysis of the historical development of Italian language from late Latin to modern Romance dialects. S/U or letter grading.


250A-250D. Seminars: Dante. (4 each) Seminar, three hours. Conditions of enrolment in regular departmental graduate courses. May be repeated for credit. S/U grading.


255A-255C. Seminars: Chivalric Poetry in Italy. (4-4-4) Seminar, three hours. Relationship between genre and its French medieval sources, with study of its evolution in Italy through Pulci, Boiardo, Ariosto, and Tasso. S/U or letter grading.


255A-255B. Seminars: Baroque. (4-4) Seminar, three hours. S/U or letter grading.

256A-256B. Seminars: 18th Century. (4-4) Seminar, three hours. S/U or letter grading.

257A-257B. Seminars: Romanticism. (4-4) Seminar, three hours. S/U or letter grading.

258A-258B. Seminars: Contemporary Italian Literature. (4-4) Seminar, three hours. S/U or letter grading.

260A. Alternative Perspectives in Italian Culture: Studies of Folk Tradition in Italian Literature. (4) Lecture, three hours. Open to undergraduate students with consent of instructor. Conscious diversity animating Italian society articulated through class, gender, and ethnonilingual groups to be studied across range of texts, some selected from literary canon, but others purely oral (tales, songs, proverbs, curses and curses, secular and ritual drama). S/U or letter grading.

260B. Women in Italian Culture. (4) Lecture, three hours. Designed for graduate students. Conditions of women within Italian society, with concentration on specific works produced by women and/or representing women’s conditions in either medieval/Renaissance or contemporary time. S/U or letter grading.

260C. Studies in Italian Cinema. (4) Lecture, three hours. Designed for graduate students. Italian cinema compared with other European countries’ and Hollywood’s cinema, with focus on its development from its origins through Fascist times to neorealism, its legacy, different genres, and contemporary scene. S/U or letter grading.

298. Variable Topics in Italian Studies. (4) Lecture, three hours; discussion, one hour. Designed for graduate students. Seminar focuses on themes and issues outside the uniquely Italian literature but covered in regular departmental graduate courses.


375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495A-495B-495C. Teaching Italian at College Level. (2 to 4 each) Seminar, to be arranged. S/U grading. 495A. Study methods in preparation for teaching Italian at college level, with emphasis on teaching proficiency-oriented instruction. May not be applied toward MA course requirements. 495B. Continuation of course 495A; study of contemporary issues in Italian language pedagogy. 495C. Effective uses of technology in foreign language classroom. Project-based seminar in which students develop materials for classroom instruction as well as an electronic teaching portfolio.

501. Cooperative Program. (2 to 8) Preparation: consent of UCLA graduate adviser and graduate dean, and host campus instructor, department chair,
and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Directed Individual Studies. (2 to 12) May be repeated twice for credit. S/U grading.

597. Preparation for MA Comprehensive Examination or PhD Qualifying Examinations. (2 to 12) S/U grading.

599. PhD Research and Writing. (2 to 12) May be repeated. S/U grading.

LABOR AND WORKPLACE STUDIES

Interdisciplinary Minor
College of Letters and Science

9244 Bunche Hall
Los Angeles, CA 90095-1478
310-206-0812
lasmnor@irle.ucla.edu
http://irle.ucla.edu/labor-studies-minor/about/

Frank T. Higbie, PhD, Chair

Faculty Committee
Mayel S. Blackwell, PhD (Chicana and Chicano Studies)
Frank T. Higbie, PhD (History)
Janice L. Reiff, PhD (History, Statistics)
Abel Valenzuela, Jr., PhD (Chicana and Chicano Studies, Urban Planning)
Noah D. Zatz, JD, MA (Law)

Scope and Objectives

The Labor and Workplace Studies minor offers an opportunity to learn about the workplace and the social, political, and economic forces that influence it. The program emphasizes the institutions of the labor market, public policy, employment relations, unions, and working-class movements. It also explores issues of race, class, and gender in the workplace. The interdisciplinary approach gives students exposure to disciplines in addition to their own majors; students should plan to take courses from multiple departments, as disciplinary breadth is encouraged.

The program is intended for students who wish to gain an in-depth understanding of the broad array of issues related to labor and the workplace. Students are encouraged to plan, with the faculty adviser and minor coordinator, either a coherent integration of courses according to a thematic or subtopical investigation or, alternatively, a comprehensive survey of the main issues involved in the study of labor and the workplace.

Undergraduate Study

Labor and Workplace Studies Minor

The Labor and Workplace Studies minor augments study in a traditional field. Students are required to complete both a departmental major and this minor. The faculty adviser certifies completion of the program.

To enter the minor, students must be in good academic standing (2.0 grade-point average or better), have completed 45 units, and file a petition and meet with the faculty adviser and minor coordinator in 9244 Bunche Hall, 310-206-0812, lasmnor@irle.ucla.edu. Students are encouraged to meet early with the academic adviser to declare the minor and design a coherent program of coursework.


A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have a minimum grade of C (2.0) in each and an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Labor and Workplace Studies

Lower-Division Courses

M1A-M18-M1CW. Work, Labor, and Social Justice in U.S. (6-6-6) (Same as Clusters M2A-M24B-M24CW) Course M1A is enforced requisite to M1B, which is essential to M1CW. Limited to first-year freshmen. Letter grading. M1A-M18. Lecture, three hours; discussion, two hours. Exploration of ways in which work has been transformed over last century, impact of this transformation on working people, and role of labor movement as force for social justice. M1CW. Special Topics. Seminar, three hours. Enforced requisite: course M1B. Topics include labor law/history, gender, race, and workplace. Satisfies Writing II requirement.

10. Introduction to Labor and Workplace Studies. (5) Lecture, three hours; discussion, one hour. Assumptions about work, including why some work is favored, whether those with good jobs really are better people than those without, and how this understanding of work and value came to be common. Unpacking of these and other assumptions about work, value, and power, with focus on low-wage workers, their communities, and their place in contemporary society. P/NP or letter grading.

Upper-Division Courses

101. Introduction to Labor and Social Movements in Los Angeles. (4) Lecture, three hours; discussion, one hour. Students gain exposure to concepts of social justice, social movements, and workers and labor issues in context of global city of Los Angeles. In-depth examination of experience of workers and role of labor movement in Los Angeles, both historically and currently. Topics include changing organization of work in U.S. and reconfiguration of employment relationships; response of labor movement, historically and in present, to managerial initiatives; way in which organized labor has handled issues of class, race, ethnicity, gender, and immigration status; and challenges facing workers in 21st century and their institutional responses in Los Angeles. P/NP or letter grading.

M141C. African American Political Thought. (4) (Same as African American Studies M141C and Political Science M180A.) Lecture, three or four hours; discussion, one hour (when scheduled). Intensive introduction to African American political thought, with focus on major ideological trends and political philosophies as they have been applied and interpreted by African Americans. Debates and conflicts in black political thought, historical contest of African American social movements, and relationship between black political thought and major trends in Western thought. P/NP or letter grading.

M116. Asian American Social Movements. (4) (Same as Asian American Studies M116.) Lecture, three hours. Designed for juniors/seniors. Examination of several dimensions of Asian American social movements, including grassroots, mass movement character, political and social vision, and social and political relevance to current issues. How movement participants linked struggle for change with own personal transformation and growth. P/NP or letter grading.

M117. Negotiation. (4) (Same as Communication M117.) Lecture, four hours. Art and science of negotiation in securing agreements between independent parties. Theory and practice that underlies successful negotiation. Experiential course in which students learn broad array of negotiation skills, including identifying one’s own (and others’) communication style, identifying and incorporating components of successful negotiation, and resolving conflict between parties. Letter grading.

M119. Asian American and Pacific Islander Labor Issues. (4) (Same as Asian American Studies M119.) Lecture, three hours. Examination of historical and contemporary labor issues in Asian and Pacific Islander American communities, with emphasis on key role that Asian and Pacific Islander American students can play in supporting labor struggles of low-income immigrants. P/NP or letter grading.

M121. Issues in Latina/Latino Poverty. (4) (Same as Chicana and Chicano Studies M121 and Urban Planning M140.) Lecture, four hours. Examination of nature and extent of urban and rural poverty confronting Latina/Latino population in U.S. Special emphasis on antipoverty policies of government and nonprofit organizations and social planning and economic development strategies. Attention also to literature on underclass. Letter grading.


M125. U.S./Mexico Relations. (4) (Same as Chicana and Chicano Studies M125.) Lecture, four hours. Examination of complex dynamics in relationship between Mexico and U.S., using political economy approach to study of asymmetrical integration between advanced industrial economies and developing countries. P/NP or letter grading.

Labor and Workplace Studies / 445
M149. Media: Gender, Race, Class, and Sexuality. (5) (Same as Communication M149 and Gender Studies M149.) Lecture, four hours; activity, one hour. Limited to junior/senior Communication Studies and Gender Studies majors and Labor and Workplace Studies minors. Required of all students enrolled in courses M162A, M162B, M162C, M166A, M166B, or M166C Seminar, three hours. Seminar involving oral histories, research on immigration/ labor/higher education, and evaluation of legislation and legal issues impacting undocumented students. Letter grading.

M166A. Research on Immigration Rights, Labor, and Higher Education. (4) (Same as Asian American Studies M166A and Chicana and Chicano Studies M165A.) Seminar, three hours. New immigrant rights movement, with particular attention to labor and higher education. Overview of history of immigrant rights movement and examination of development of coalition efforts between labor movement and immigrant rights movement nationally and locally. Special focus on issues of undocumented students in higher education, challenges facing undocumented immigrant students, and legislative and policy issues that have emerged. Students conduct oral histories, family histories, research on immigration and immigrant rights, write poetry and spoken word about immigrant experience, and work to collectively develop student publication on immigrant students in higher education. P/NP or letter grading.

M166B. Research on Immigration Rights, Labor, and Higher Education. (4) (Same as Asian American Studies M166B and Chicana and Chicano Studies M165B.) Seminar, three hours. Research conducted by students in course M166A involving oral histories, research on immigration/labor/higher education, and evaluation of legislation and legal issues impacting undocumented students. Letter grading.

M166C. Research on Immigrant Students and Higher Education. (4) (Same as Chicana and Chicano Studies M156C.) Seminar, three hours. Enforced prerequisites: courses M165A, M165B. Expansion of research conducted by students in course M165A and M166B involving oral histories, research on immigration/labor/higher education, and evaluation of legislation and legal issues impacting undocumented students. Letter grading.

M170. Improving Worker Health: Social Movements, Policy Debates, and Public Health. (4) (Same as Community Health Sciences CM170.) Lecture, three hours; fieldwork, two hours. Examination of intersection between work, health, and environment, analysis of social causes of health disparities, investigation of historical trends and social movements, interpretation of current policy debates, and development of innovative interventions. P/NP or letter grading.

M171. Labor and Economic Development. (4) (Same as Urban Planning CM172.) Lecture, three hours. Exploration of economic development and identification of ways that labor unions and social movements directly and indirectly influence shape economic development. Wide range of roles that labor plays, and could play, in promoting and supporting economic development for all. Letter grading.

M172. Free Speech in Workplace. (4) (Same as Communication M172.) Lecture, three hours. Focus on concept of freedom of expression in workplace and how First Amendment, case law, and federal and state statutes affect one’s ability to speak at work. Conflict between discrimination law and ability to speak freely at work as well as meaning and limits of academic freedom. P/NP or letter grading.

M173. Nonviolence and Social Movements. (4) (Same as African American Studies M173, Asian American Studies M173, Chicana and Chicano Studies M173.) Lecture, three hours; discussion, one hour. Overview of nonviolence and its impact on social movements both historically and in their present context in the U.S. and beyond, featuring lectures, conversations, films, readings, and guest speakers. Exploration of some historic contributions of civil rights struggles and role of nonviolent action throughout recent U.S. history, examination of particular lessons of nonviolent movements as they impact social change organizing in Los Angeles. P/NP or letter grading.
M190. Southern California Regional Economy. (4) (Same as Urban Planning CM137.) Lecture, three hours. Introduction to regional economy, with emphasis on Los Angeles. Key economic sectors, labor market composition, and review of conflicting portrayals of region. Two all-day tours of key economic regions and guest lectures by regional experts included. Letter grading.

181. Los Angeles Labor and Social Science Research Principles, Methods, and Practices. (4) Lecture, three hours. Introduction to basic social science research methods. Through combination of lectures, key readings, and participation in hands-on research, students develop understanding of critical debates regarding role of research in socioeconomic context that impacts workers and their organizations and communities at large. Introduction to several research method techniques that are highly effective in producing sound and rigorous studies about and for labor movement, including important data that can be used for policy analysis and political action. Special emphasis given to understanding research that has supported different labor movements. P/NP or letter grading.

182A. Oral History and Collective Memory: Research Methods and Applications of 21st-Century Narratives. (4) Lecture, three hours. Part of two-part series on oral history, memory, and public engagement. Introduction to field of oral history and hands-on experience in interviewing, processing, technology, and public credit. Readings and discussion of literature about oral history theory and methods and examination of how scholars use oral history interviews to develop historical narratives about working class communities. Students learn foundations for designing and executing oral history research projects and undertake independent fieldwork that allows them to apply methods and approaches studied in class. Emphasis on innovative uses of oral history interviews that bring narratives to wide public audience. No prior knowledge or experience with interviewing and processing required. P/NP or letter grading.


187. Special Courses in Labor and Workplace Studies. (4) Lecture, three hours; discussion, one hour. Program-sponsored experimental or temporary courses, such as those taught by visiting faculty members. May be repeated for credit. P/NP or letter grading.

188. Special Courses in Labor and Workplace Studies. (4) Seminar, four hours. Program-sponsored experimental or temporary courses, such as those taught by visiting faculty members. May be repeated for credit. P/NP or letter grading.

194A. Research Group Seminars: Labor Summer Research Internship Program. (4) Seminar, three hours. Enrolled corequisite: course 195A. Designed for undergraduate students who are part of Labor Summer Research internship program. Discussion of qualified applied research methods used by union researchers and scholars engaged in labor relations and workplace studies. Through combination of lectures, key readings, and active participation in hands-on research internship with local unions and organizations, development of understanding of critical debates within the field of research and sociopolitical contexts that impact low-wage workers and their families. May be repeated for credit. Offered in summer only. P/NP or letter grading.

194B. Research Group Seminars: Labor and Workplace Studies. (4) Seminar, three hours. Designed for undergraduate students who are part of research group. Discussion of research methods and current literature in field of labor studies or of research of faculty member and/or students. May be repeated for credit. P/NP or letter grading.

195A. Community or Corporate Internships in Labor and Workplace Studies. (4) Tutorial, one hour; fieldwork, 15 hours. Enrolled corequisite: course 194A. Limited to juniors/seniors. Internship in supervised setting to be arranged by instructor. Students meet on regular basis with instructor and provide periodic written reports on their experience. May be repeated for credit. Individual contract with supervising faculty member required. Offered in summer only. P/NP or letter grading.

195B. Community or Corporate Internships in Labor and Workplace Studies. (2 to 5) Tutorial, to be arranged; internship, up to 15 hours. Limited to juniors/seniors. Internship in supervised setting in community agency, labor union, or other organization concerned with work and employment issues. Placement to be arranged by instructor. Students meet on regular basis with instructor and provide periodic written reports on their experience. May be repeated for credit. Individual contract with supervising faculty member required. P/NP or letter grading.

199. Directed Research in Labor and Workplace Studies. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Latin American Studies

Interdepartmental Program
College of Letters and Science
10373 Bunche Hall
Los Angeles, CA 90095-1487
310-206-6571
idp@international.ucla.edu
http://www.international.ucla.edu/institute/academics/las/

Bonnie Taub, PhD, Co-Chair
Kevin B. Terracciano, PhD, Co-Chair

Faculty Committee
Leisy J. Abrego, PhD (Chicana and Chicano Studies) Patricia Arroyo Calderon, PhD (Spanish and Portuguese)
Cesar J. Ayala, PhD (Sociology)
Stephen A. Bell, PhD (Geography, History)
Adriana J. Bergero, PhD (Spanish and Portuguese)
Verónica Cortés, PhD (Spanish and Portuguese)
Robin L.H. Derby, PhD (History)
David E. Hayes-Bautista, PhD (Health Policy and Management)
Susanna B. Hecht, PhD (Environment and Sustainability, Geography, Urban Planning)
Rubén Hernández-León, PhD (Sociology)
J. Randal Johnson, PhD (Spanish and Portuguese)
Steven J. Loza, PhD (Ethnomusicology)
Elizabeth A. Marchant, PhD (Comparative Literature, Gender Studies)
Bonnie Taub, PhD (Community Health Sciences)
Kevin B. Terracciano, PhD (History)
Abel Valenzuela, Jr., PhD (Chicana and Chicano Studies, Urban Planning)

Scope and Objectives

UCLA has been in the forefront of U.S. universities with significant teaching and research interests in Latin American studies for more than 50 years. More than 100 faculty members from 22 departments and professional schools regularly offer a broad range of courses with an emphasis on Latin America. These courses offerings in the humanities, social sciences, fine arts, and professional fields provide students a unique opportunity to focus on Latin America, a region of growing importance.

The Latin American Studies Program offers the Master of Arts degree. Students pursue specialized coursework and interests, culminating in an interdisciplinary research study. Cooperative degree programs with the UCLA Schools of Education and Information Studies, Management, Public Health, and Public Affairs provide the opportunity to combine the MA in Latin American Studies with a master’s degree in a professional field.

Information on the undergraduate program in this discipline, which offers a major and a minor, can be found in the International and Area Studies section earlier in this catalog.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Latin American Studies Program offers the Master of Arts (MA) degree in Latin American Studies.

Three articulated degree programs (Latin American Studies MA/Library, MA/Public Health MPH) and two concurrent degree programs (Latin American Studies MA/Management MBA and Latin American Studies MA/Urban Planning MURP) are also offered.

Latin American Studies

Graduate Courses

205. Latin Americanist Scholarship. (4) Lecture, three hours. Panoramic introduction to methods and issues in various disciplines that study Latin America, with guest lecturers from various fields. (Latin American Studies core course.)

250B. Interdisciplinary Seminar: Latin American Studies. (4) Seminar, three hours. Problem-oriented seminar on critical areas stressed in University’s co-operative programs in Latin America.

250C. Interdisciplinary Topics in Latin American Studies. (4) Reading knowledge of Spanish or Portuguese normally required. Seminar devoted to selected topics of an interdisciplinary nature.

260. Health and Culture in Americas. (4) (Same as Anthropology M233R and Community Health Sciences M260.) Lecture, three hours. Recommended prerequisite: Community Health Sciences 132. Health issues throughout Americas, especially indigenous/
Mestizo Latin American populations. Holistic approach covering politics, economics, history, geography, human rights, maternal/child health, culture. Letter grading.

M262. HIV/AIDS and Culture in Latin America. (4) (Same as Community Health Sciences M250.) Seminar, three hours. Exploration of cultural, political, and public health context for people living with and at risk for HIV/AIDS and their families in Latin America. Public health aspects, including epidemiology, morbidity concerns and community interventions, medical anthropological study of experience of those impacted, and grass-roots responses, as well as political/economic context addressing poverty and structural violence. Letter grading.

M264. Latin America: Traditional Medicine, Shamanism, and Folk Illness. (4) (Same as Anthropology M233Q and Community Health Sciences M264.) Lecture, three hours. Recommended preparation: Community Health Sciences 132, bilingual Spanish/English skills. Examination of role of traditional medicine and shamanism in Latin America and exploration of how indigenous and mestizo groups diagnose and treat folk illness and Western-defined diseases with variety of health-seeking methods. Examination of art, music, and ritual and case examples of religion and healing practices via lecture, film, and audio- and video presentations. Letter grading.

M268A-M268B. Seminars: Recent Latin American History. (4) (Same as History M268A-M268B.) Seminar, three hours. Course M268A is requisite to M268B. Reading knowledge of Spanish and Portuguese normally required. Seminar devoted to selected topics of interdisciplinary nature. In Progress (M268A) and letter (M268B) grading.

291A-291B. Variable Topics in Latin American Studies. (4-8) Seminar, three hours. Selected topics on Latin America. May be repeated for credit with topic change. S/U or letter grading.

501. Cooperative Program. (2 to 8) Preparation: consent of UCLA graduate adviser and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. May be repeated, but only 4 units may be applied toward the minimum graduate course requirement. S/U or letter grading.

597. Preparation for MA Comprehensive Examination. (4) Tutorial, to be arranged. Ordinarily taken only during term in which student is being examined. S/U grading.

598. Research for and Preparation of MA Thesis. (4) Tutorial, to be arranged. Only 4 units may be applied toward minimum graduate course requirement. S/U grading.

LAW
School of Law
1242 Law Building
71 Dodd Hall, Admissions Box 951476
Los Angeles, CA 90095-1476
310-825-4841
admissions@law.ucla.edu
http://www.law.ucla.edu

Jennifer L. Mnookin, JD, PhD, Dean

Professors
Khaleed M. Abou El Fadl, JD, MA, PhD (Omar and Azermdala Affi Endowed Professor of Islamic Law)
E. Tendayi Achiume, JD, Acting
Iman Aminabadi, JD, MA
Stephen M. Bainbridge, JD, MS (William D. Warren Professor of Law)
Asli U. Bäli, JD, MPhil, MPA, PhD
Steven A. Bank, JD (Paul Hastings Endowed Professor of Business Law)
Stuart A. Banner, JD (Norman Abrams Endowed Professor of Law)
Samuel L. Bray, JD
Tamie L. Bryant, JD, MA, PhD
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Devon W. Carbado, JD (Honorable Harry Pregerson Endowed Professor of Law)
Ann E. Carlson, JD (Shirley and Ralph Shapiro Professor of Environmental Law)
Duane W. Champagne, MA, PhD
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Kimberle W. Crenshaw, JD, LLM
Scott L. Cummings, JD (Robert Henigson Endowed Professor of Legal Ethics)
Joshua F. Dienstag, JD, MA
Sharon Dolovich, JD, PhD
Ingrid Eagly, JD
Kristen E. Eichensehr, JD, MPhil, Acting
Stephen A. Gardbaum, JD, CPE, MSc, PhD
Carole E. Goldberg, JD (Jonathan D. Varat Endowed Professor of Law)
Robert D. Goldstein, JD, MEd
Laura E. Gómez, JD, PhD
Mark Grady, JD
Mark D. Greenberg, JD, DPhil
Cheryl I. Harris, JD (Rosalinde and Arthur Gilbert Foundation Endowed Professor of Civil Rights and Civil Liberties)
Barbara Herman, MA, PhD (Gloria and Paul Griffin Professor of Philosophy)
Jill R. Horvitz, JD, MA, PhD
Leslie N. Johnos, MA, MS, PhD
Jerry Kang, JD (Korea Times-Hankook Ibo Professor of Korean American Studies and Law)
Sung Hui Kim, JD, MA
Russell Korobkin, JD (Richard C. Maxwell Professor of Law)
Maximo Langer, LLB, SJD
Douglas G. Lichtman, JD
Gerald P. López, JD
Lynn M. LoPucki, JD, LLM (Security Pacific Bank Professor)
Timothy Malloy, JD
Jon D. Michaels, JD, MA
Jennifer L. Mnookin, JD, PhD (David G. Price and Dallas P. Price Professor of Law)
Rachel F. Moran, JD (Conner Professor of Law)
Hiroyo Motomura, JD (Susan Westerberg Prager Endowed Professor of Law)
Neil W. Netanel, JD, JSD (Pete Kameron Endowed Professor of Law)
Mary D. Nichols, JD, in Residence
Jason S. Oh, JD
Frances E. Olsen, JD, SJ
James Park, JD
Edward A. Parson, MSc, PhD (Dan and Rae Emmett Endowed Professor of Environmental Law)
Sunita Patel, JD, Acting
Mark A. Peterson, AM, PhD
Kai Raustiala, JD, PhD
Richard M. Re, JD, MPhil, Acting
Angela R. Riley, JD
James Salzman, JD, MSc
Richard H. Sander, JD, MA, PhD
Joanna C. Schwartz, JD
Seana Shiffrin, JD, DPhil (Pete Kameron Professor of Law and Social Justice)
Claude S. Spillenger, JD, MA, MPhil
Kirk J. Stark, JD (Barnall Family Endowed Professor of Tax Law and Policy)
Richard H. Steinberg, JD, PhD
Katherine Stone, JD (Arjay and Frances Fearing Miller Professor of Law)
Rebecca Stone, JD, MPhil, DPhil, Acting
Alexander Streitmatter, JD, BSc, MM, PhD
Sherod Thaxton, JD, MA, PhD, Acting
Eugene Volokh, JD (Gary T. Schwartz Endowed Professor of Law)
Alex Wang, JD, Acting
Adam D. Winkler, JD, MA
Jonathan M. Zasloff, JD, MA, MPhil, PhD
Noah D. Zatz, JD, MA
Erik M. Zoll, JD, MBA (Michael H. Schill Endowed Professor of Law)

Professors Emeriti
Richard L. Abel, PhD, LLB, LLD (Conner Professor Emeritus of Law)
Norman Abrams, JD
Alison G. Anderson, JD
Peter Arendt, JD
Michael R. Asimow, JD
Paul B. Bergman, JD
David A. Binder, LLB
Gary L. Blasi, JD
Grace Ganz Blumberg, JD, LLM
David H. Dolinko, JD, PhD
Susan Fletcher French, JD
Kenneth W. Graham, Jr, JD
Joel F. Handler, JD (Richard C. Maxwell Professor Emeritus of Law)
Kenneth L. Karst, LLB (David G. Price and Dallas P. Price Professor Emeritus of Law)
Kenneth N. Klee, JD
William A. Klein, LLB (Richard C. Maxwell Professor Emeritus of Law)
Christine A. Littleton, JD
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Henry W. McGee, Jr., JD, LLM
William M. McGovern, Jr., LLB
Albert J. Moore, JD
Herbert Morris, LLB, DPhil
Stephen R. Munzer, JD
Grant S. Nelson, JD
Susan Westerberg Prager, JD, MA (Arjay and Frances Fearing Miller Professor Emerita of Law)
Samuel C. Thompson, JD, MA, LLM
Philip R. Trimble, MA, LLB
Jonathan D. Varat, JD
Stephen C. Yezell, JD, MA (David G. Price and Dallas P. Price Professor Emeritus of Law)

Lecturers
David B. Babbe, JD
Julianne B. Cranmer, JD
Steven K. Dargan, JD, MA
Patrick D. Goodman, JD, MD
Deirdre P. Lanning, JD
Jason A. Light, JD
Kerry A. Lyon-Grossman, JD
Paul Wonsowicz, JD

Adjunct Professors
Eileen A. Scallen, JD, MA
Robert Bradley Sears, JD

Adjunct Assistant Professors
Joel A. Feuer, JD, MA
Michael T. Roberts, JD, LLM

Academic Administrators
Susan Akens, JD
Joseph P. Berna, JD, MA, MDiv
Kenith J. Conron, MPhil, ScD
Sean B. Hecht, JD
Cara Horowitz, JD
Jasleen Kohli, JD
Allison Korn, JD
Lisa M. Mead, JD
Ayako Miyashita, JD
Tracey G. Parr, JD
Lara Stemple, JD
Will Watts, JD

Scope and Objectives
The UCLA School of Law is designed to produce lawyers who are well-prepared for the various private and public roles that are assigned to members of the legal profession. The school pioneered clinical teaching, is a leader in interdisciplinary research and training, and is at the forefront of efforts to link research to its effects on society and the legal profession. Students do not undertake a specific major but have the opportunity to enroll in a wide variety of courses dealing with various legal fields.

The law school is unique in that it also offers students an opportunity to specialize in six
specific areas of law: business law and policy; critical race studies; entertainment, media, and intellectual property law; international and comparative law; law and philosophy; and public interest law and policy.

The school offers a three-year curriculum leading to the JD degree and two advanced degrees—Master of Laws (LLM) and Doctor of Juridical Science (SJD).

Professional Study

The School of Law offers the Juris Doctor (JD), Doctor of Juridical Science (SJD), and Master of Laws (LLM) degrees.


The undergraduate courses offered by the School of Law are designed for undergraduate students only. For information about the legal curriculum of the School of Law, see the school website.

Law, Undergraduate

Upper-Division Courses


161. Consumer Bankruptcy Policy Seminar. (3) Seminar, 13 hours. Examination of consumer bankruptcy policy with one architect of 1978 Bankruptcy Code. Discussion of debt payment in ancient Babylon where slaves could be sold to pay off nonpayment of relative’s debt. Examination of bankruptcy in U.S. history and analysis of heart of consumer bankruptcy policy, such as when debtors should be released from debts, what property debtors should keep, and how debtors can put together re-payment plans. P/NP or letter grading.

163A. International Human Rights Colloquium. (3) Lecture, four hours. Alternative approaches to understanding international human rights law. Consideration of legal, political, social, and economic perspectives. Weekly presentations on topic by 10 leading human rights scholars. May be repeated for credit. P/NP or letter grading.


170. Race and Racism in California Legal History, 1846 to Present. (4) Seminar, 14 hours. Limited to freshmen/sophomores. Exploration of California legal history, with focus on issues of race and racism, beginning with mid-19th-century transition from Mexican Alta California to U.S. territory and statehood. Topics include state measures affecting California Indians in 19th century, African Americans in California, 20th-century history, measures used to curtail Chinese immigration laws designed to prevent racial intermixing, Alien Land Laws aimed at Japanese residents of California, relocation of Japanese citizens after Pearl Harbor, California’s response to U.S. immigrants from dust bowl during great depression, post-World War II through 1960s measures aimed at equal access to things like home ownership, employment, and rental housing, and uses of initiative in modern era. P/NP or letter grading.

173. Topics in American Constitutional History. (4) Lecture, three hours. Introduction to major themes, events, and constitutional history. U.S. Supreme Court decisions and other sources of constitutional meaning, including popular movements and expressions of constitutional principle from actors in other branches of federal and state governments. Emphasis on historical background and ideological context for particular constitutional controversies at various points in American history, with more formal analysis of particular decisions and competing methods of constitutional interpretation considered. Topics include origins of judicial review, debates over meaning of federalism in early republic, slavery and constitution, Reconstruction Amendments, laissez-faire constitutionalism, citizenship and empire, origins of civil liberties, New Deal constitutionalism, and pre-history of Brown versus Board of Education. P/NP or letter grading.

175. Seminar: Individual Rights Protected by U.S. Constitution. (3) Seminar, two hours. Limited to juniors/seniors. Introduction to and examination of individual rights provided under Bill of Rights and 14th Amendment to U.S. Constitution, including freedom of speech and press, religious freedom, right to privacy (including procreative rights) and due process of law; constitutional protection against discrimination based on race and gender, and basic criminal procedure protections. Emphasis on principal Supreme Court cases establishing scope of those rights and their limits. Letter grading.

180. Special Topics in Law. (4) Lecture, four hours. Topics of special interest to undergraduate students. Specific subjects may vary each term depending on particular interest of instructors or students. May be repeated for credit. P/NP or letter grading.

182. Law and Popular Culture. (4) Lecture, four hours. Focus on interface between two important subjects—law and popular culture. Students view series of films or television shows related to law, lawyers, and legal system. Discussion of pop culture treatment of subjects such as adversary system, good and bad lawyers, female lawyers, lawyers from lesbian, gay, bisexual, and transgender community, minority lawyers, work life of lawyers, legal education, ethical issues, jury system, and criminal and civil justice, drawing on film theory and film-making technique to deepen understanding of interaction between law and popular culture. Illumination of ways in which pop culture products both reflect and change social views about law and lawyers. Offered in summer only. P/NP or letter grading.

183. Law and Order. (2) Lecture, two hours. Intro- duction to basic principles of criminal law. How to read and interpret judicial cases and provisions of penal code to learn how American criminal justice system works. Discussions structured to simulate experience of typical law school classroom. P/NP or letter grading.

184. Introduction to Legal Education. (4) Lecture, four hours. Preliminary introduction to legal pedagogy and development of American legal system. Analysis of appellate and U.S. Supreme Court cases and legisla- tive materials to develop foundational law school skills and become familiar with principles of both scholarly and practice-oriented legal analysis. Topics include introduction to case analysis, reading cases, exploring precedent and stare decisis, separation of powers, and statutory interpretation. P/NP or letter grading.

185. Corporate Mock Trial. (4) Lecture, four hours. Introduction to basic principles of business law, such as how law applies to various business entities, duties and liabilities of corporate officers and directors, and shareholder derivative suits. American legal system and how litigation progresses from filing of complaints through trial. Students participate in mock trial at end of course. P/NP or letter grading.

186. Law and Order. (4) Lecture, four hours. Intro- duction to basic principles of criminal law. How to read and interpret judicial cases and provisions of penal code to learn how American criminal justice system works. Discussions structured to simulate experience of typical law school classroom. P/NP or letter grading.

187A. Legal History Colloquium. (3) Seminar, two hours. Corequisite: course 193. Reading of scholarly papers prepared by school faculty members and other members in fields of history, economics, and political science. Preparation of critiques and dis- cussion of issues in seminar setting with author of pa- per. P/NP or letter grading.

187B. Politics and International Law Colloquium. (3) Seminar, two hours. Corequisite: course 193. Limited to College Honors students. Lectures on alterna- tive theoretical approaches (including realism, institu- tionalism, and constructivism) to understand relation- ship between politics and international law. Weekly presentations on topic by 10 leading law and political science scholars from the U.S. and abroad. Reading of scholarly papers, preparation of critiques, and dis- cussion of issues in seminar setting with authors of papers. P/NP or letter grading.

191. Variable Topics Research Seminars: Law—California Legal History. (4) Seminar, two hours. Requisite: course 170. Research project, selected in consultation with faculty member and using original and secondary materials, to be conducted, followed by major presentation of student work to class and writing of major research paper. Letter grading.

193. Journal Club Seminars: Law. (1) Seminar, one hour; discussion, two hours. Corequisite: course 187A. Adjunct course limited to undergraduate stu- dents taking law colloquium. Intensive review and follow-up of scholarly papers presented in colloquium series. Reading of legal cases and supplemental ma- terial to provide legal framework for each scholarly paper presented in colloquium. Supervised by faculty member in charge of colloquium series. May be re- peated for credit. P/NP grading.

199. Directed Research in Law. (1 to 6) Tutorial, three hours per week per unit. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Culminating scholarly paper re- quired. May be repeated for credit. Individual contract required. P/NP or letter grading.

LESBIAN, GAY, BISEXUAL, TRANSGENDER, AND QUEER STUDIES

Interdisciplinary Minor
College of Letters and Science

361 Humanities Building
Box 957233
Los Angeles, CA 90095-7233
310-206-3032
ltbrown@humnet.ucla.edu
http://lgbtqstudies.ucla.edu

Alicia Gaspar de Alba, PhD, Chair

Faculty Committee

Anurima Banerji, PhD (World Arts and Cultures/Dance)
Stu-Aileen Case, PhD (Theater)
Michelle F. Eral, PhD (Gender Studies)
Alicia Gaspar de Alba, PhD (Chicana and Chicano Studies, English, Gender Studies)
Michael A. Hill, PhD (Mathematics)
Ian W. Holloway, MSW, MPH, PhD (Social Welfare)
Peter D. Kazaras, JD (Music)

Lesbian, Gay, Bisexual, Transgender, and Queer Studies / 449
Scope and Objectives

Although the initial focus in lesbian, gay, bisexual, transgender, and queer studies is usually on minority sexualities and transgenderism, it is impossible to study them in any meaningful way without raising questions about gender, race, ethnicity, economics/class, globalization, and the construction of scientific knowledge. Thus lesbian, gay, bisexual, transgender, and queer studies, which may at first seem to concern the private practices of a small number of people, inevitably leads to the much larger study of sexuality and culture. The Lesbian, Gay, Bisexual, Transgender, and Queer Studies program represents an important vantage point from which to investigate the social construction of sexual identity, social control of behavior, changing definitions of the family, and the place of sexual and gender expression in the public and private spheres. Because of the kinds of questions asked, lesbian, gay, bisexual, transgender, and queer studies is the site of some of the most exciting work being done today on the relationship between sexuality and culture.

The UCLA minor in Lesbian, Gay, Bisexual, Transgender, and Queer Studies provides students with the opportunity to study sexuality from a variety of cultural and disciplinary perspectives meant to engage students in some of the most cutting-edge research in lesbian, gay, bisexual, transgender, and queer studies. In addition, seniors in the minor are expected to do a capstone internship in an international, national, or community organization, thereby acquiring invaluable firsthand knowledge, experience, and data. After completing the minor, students should be familiar with the theoretical tools that different disciplines employ to study sexuality. They should be acquainted with some of the many different ways sexuality has been organized in the past and is organized in different cultures in the present and should have an enhanced understanding and appreciation both of the sexual diversity of the world in which they live and of the complex ways in which sexuality intersects with other categories of identity and practice.

Undergraduate Study

Lesbian, Gay, Bisexual, Transgender, and Queer Studies Minor

To enter the Lesbian, Gay, Bisexual, Transgender, and Queer Studies minor, students must have an overall grade-point average of 2.0 or better.

Required Upper-Division Courses (28 units)

Lesbian, Gay, Bisexual, Transgender, and Queer Studies M114, 180SL, and five additional courses (including at least one 181 course and one 183 course) to be selected from Asian American Studies 147C, Education 147, Gender Studies 187, Lesbian, Gay, Bisexual, Transgender, and Queer Studies M101A through M101D, M107B, M115, M116, M118, M125, M126, M133, M136, M137, M141, M142, M147A, M167, 181, 182, 183, 184, M191D, M191E, Psychology 129E, Scandinavian 174B, Sociology M162.

Students may petition to apply a non-listed course to the minor if they can show that lesbian, gay, bisexual, transgender, or queer issues represent a significant part (at least 25 percent) of the course content. Students are strongly urged to keep in close contact with the program coordinator who can help them plan their course of study.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Required Upper-Division Courses

M101A. Premodern Queer Literatures and Cultures. (5) (Same as English M101A and Gender Studies M105A) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3. Survey of discrete period of queer literature from beginning to circa 1850. Works by such writers as Sappho, Plato, Marlowe, Shakespeare, and Thomas Gray may be included. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M101B. Queer Literatures and Cultures, 1850 to 1970. (5) (Same as English M101B and Gender Studies M105B) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3. Survey of discrete period of queer literature and culture from circa 1850 to 1970. Works by such authors as Walt Whitman, Radclyffe Hall, Gertrude Stein, Virginia Woolf, Langston Hughes, Tennessee Williams, Henry Blake Fuller, and James Baldwin may be included. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M101C. Queer Literatures and Cultures after 1970. (5) (Same as English M101C and Gender Studies M105C) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3. Examination of cultural production, specifically literature, produced by queers after Stonewall rebellion in New York in 1969, with special emphasis on social work as a topic of interest for U.S. Writings and films by such authors as Andrew Holleran, Leslie Feinberg, Achy Obejas, Essex Hemphill, Audre Lorde, Cheryl Dunye, and Alison Bechdel may be included. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M101D. Studies in Queer Literatures and Cultures. (5) (Same as English M101D and Gender Studies M105D) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3. Specialized studies course in queer literatures and cultures. Topics focus on particular problem or issue in terms of its relationship to queer cultures and writings. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M107B. Studies in Gender and Sexuality. (5) (Same as English M107B and Gender Studies M107B) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3. Examination of literary and cultural production through lens of gender and sexuality. Depending on instructor emphasis, may be historical, regional, national, comparative, thematic and national, and/or intersectional aspects of identity and representation such as race and ethnicity. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M114. Introduction to Lesbian, Gay, Bisexual, and Transgender Studies. (5) (Same as Gender Studies M114) Lecture, three hours; discussion, one hour. Introduction to history, politics, culture, and scientific study of lesbians, gay men, bisexuals, and transgender people: examination of sexuality and gender as categories for investigation; interdisciplinary theories and research on minority sexualities and genders. P/NP or letter grading.

M115. Topics in Study of Sexual and Gender Orientations. (4) (Same as Gender Studies M115) Lecture/discussion, three hours. Requisite: course M114 or Gender Studies 10. Studies in arts, humanities, social sciences, and/or life sciences on aspects of sexual orientation, gender identity, and lesbian, gay, and/or bisexual issues; variable topics may include cultural representations, political and cultural change, life and health experiences, and queer or transgender theories; multicultural and cross-cultural emphases. May be repeated for credit. Letter grading.


M118. Queering American History. (4) (Same as Gender Studies M118) Lecture, four hours. Enforced requisite: one prior liberal arts or related minor or concentration in transgender, and queer studies course. History of sexual and gender minorities in U.S. Topics include changing norms, romantic friendships, medical discourse, liberation politics, post-Stonewall culture, and the trans-gender movement, queer theory, and politics. P/NP or letter grading.

M125. Exploring Intersections of Ability and Sexuality. (4) (Same as Disability Studies M125) Lecture, three hours. Exploration of intersectionality between understanding cultural formations, dominant/nondominant power dynamics, and systems of visual representation. Intersectional approach to explore how ability and sexuality intersect, overlap, and change notions of identity. Use of scholarly texts from disability studies, lesbian, gay, bisexual, and transgender studies, popular culture, performance, and film to investigate factors that shape ability and sexuality as basis for identity. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M126. Feminist and Queer Theory. (5) (Same as English M126 and Gender Studies M126) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3. Recommended: one course from English 120, 121, Gender Studies 102, 103, or 104. Focus on feminist and queer theoretical concepts and debates in study of gender, sexuality, and kinship, with focus on their interrelated significance for making of culture. Readings to be interdisciplinary, with possible emphasis on impact of changing ideas of gender and sexuality on specific historical cultures. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M132. Border Consciousness. (4) (Same as Chicana and Chicano Studies M132) Lecture, three hours; discussion, one hour (when scheduled). Enves-
tigation through history, popular culture, and mass media of bisexual and transsexual identities produced by geographical and cultural space between Mexico and U.S. Special attention to border consciousness as site of conflict and resistance. Letter grading.


M136. Focus on Art/Chicana. (4) (Same as Chicana and Chicano Studies M136.) Lecture, four hours. Examination of censorship in visual arts, particularly art of queer Chicana/Chicana and Latina artists such as Alba Lopez, Estel Hernandez, and Alex Donis. Other censored artists include feminist artist Yolanda Lopez, queer artists Robert Mapplethorpe and David Wojnarowicz, painter Christ Ofili, photographers Sally Mann and Andrey Sereno, printmaker Curie Chagoya, muralist Noni Olabisi, writer Salman Rushdie, and four performance artists—Karen Finley, Tim Miller, John Fleck, and Holly Hughes—whose work was vetoed by chair of National Endowment for the Arts (NEA) in 1990 after they had successfully passed through NEA's peer review process and who came to be known as NEA Four. P/NP or letter grading.

M137. Lesbian, Gay, Bisexual, Transgender, and Queer Pop Music. (5) (Same as Music History M137.) Lecture, four hours; discussion, one hour. Survey of English-language popular music in 20th century, with focus on lesbians, gay men, and members of other sexual minorities as creators, performers, and audience members. Letter grading.

M141. African American Women's History. (4) (Same as African American Studies M141.) Lecture, four hours. Historical examination of black women's experiences in U.S. from antebellum era to present. By situating black women's experiences within major historical transitions in American history, exploration of key themes, including gender formation, sexuality, labor and class, collective action, gender and sexual violence, reproduction, and role of law. How have intersecting forms of oppression impacted black women's historical lives? How is difference constructed through interrelated and overlapping ideologies of race and gender? How do historians uncover women's historical lives and what are challenges to such discoveries? Examination of black women's individual and collective struggles for freedom from racism, sexism, and heteropatriarchy, as well as black women's participation in and challenge to white men's violent power. Women's liberation, civil rights, and black power. Investigation of black women's intellectual history, including their cultural productions. Letter grading.

M142. Race, Gender, and Punishment. (4) (Same as American Studies M142.) Seminar, four hours. Interdisciplinary examination of historical and contemporary development of modern prison industrial complex in U.S., with attention to impact of prison industrial complex on immigrants, including undocumented residents, homeless populations, women, African Americans, and transgender nonconforming and lesbian, gay, bisexual, and transgender communities. Why are black and Latino prisoners more likely than white prisoners to be incarcerated? What historical conditions and ideologies gave rise to this massive explosion in U.S. prisoner populations? What policies have fueled mass imprisonment? Who is imprisoned? How have politicians used imprisonment as response to economic transformations and perceived social disorders? How is current crisis analogous to or distinct from regimes of racialized punishment—prior historical moments? Letter grading.

M147A. Psychology of Lesbian Experience. (4) (Same as Gender Studies M147A and Psychology M147A.) Lecture, two hours; discussion, one hour. Requirement: course 10 or Psychology 10. Designed for juniors/seniors. Review of research and theory in psychology and gender studies to examine various aspects of lesbian experience, impact of homophobia and stigma, gender role socialization, minority status of women and lesbians, identity development within a multicultural society, changes in psychological theories about lesbians in sociocultural history; P/NP or letter grading.

M167. Contested Sexualities. (4) (Same as Gender Studies M167.) Lecture, three hours; discussion, one hour. Sociological perspectives on formation, control, and resistance of lesbian, gay, bisexual, and transgender people. Variable topics include identity and community; age, class, gender, and racial diversity; and analysis of contemporary issues affecting contested sexualities. Letter grading.

180SL. Lesbian, Gay, Bisexual, and Transgender Institutions and Organizations. (4) Lecture, three hours; fieldwork, five hours. Preparation: prior one hour lesbian, gay, bisexual, and transgender studies course. Service-learning course that offers opportunity for students to work in lesbian, gay, bisexual, and transgender-related community organizations, to reflect on political and theoretical issues involved in such work and such organizations, and to draw ideas from various courses they have already taken and test them in settings outside UCLA. P/NP or letter grading.

181. Variable Topics in Queer Diversities. (4) Lecture, four hours. Study of topics about queer diversities from lesbian, gay, bisexual, and transgender studies perspective. May be repeated for credit with consent of instructor. P/NP or letter grading.

182. Variable Topics in Education, Law, and Public Policy. (4) Lecture, four hours. Study of law, education, and public policy topics from lesbian, gay, bisexual, and transgender studies perspective. May be repeated for credit with consent of instructor. P/NP or letter grading.

183. Variable Topics in Queer Subjectivities/Theories/History. (4) Lecture, four hours. Study of topics about queer subjectivities/theories/history from lesbian, gay, bisexual, and transgender studies perspective. May be repeated for credit with consent of instructor. P/NP or letter grading.

184. Variable Topics in Science, Health, and Genetics. (4) Lecture, four hours. Study of science, health, and genetics topics from lesbian, gay, bisexual, and transgender studies perspective. May be repeated for credit with consent of instructor. P/NP or letter grading.

186. Selected Topics in Lesbian, Gay, Bisexual, and Transgender Studies. (4) Lecture, four hours. Study of one or more topics from lesbian, gay, bisexual, and transgender studies. Consult Schedule of Classes for topics and instructors. May be repeated for credit with consent of instructor. P/NP or letter grading.

190D. Topics in Education. (5) (Same as English M190D and Gender Studies M190D.) Seminar, three or four hours. Enforced requisites: English Composition 2 or course 191D. Tutorial, one hour. May be repeated for credit with specific topic. P/NP or letter grading.

191E. Topics in Gender and Sexuality. (5) (Same as English M191E and Gender Studies M191E.) Seminar, three or four hours. Enforced requisites: English Composition 3. Consult Schedule of Classes for topics and instructors. May be repeated for credit with specific topic. P/NP or letter grading.

191T. Topics in Queer Studies. (5) (Same as English M191T and Gender Studies M191T.) Seminar, three or four hours. Enforced requisites: English Composition 3. Consult Schedule of Classes for topics and instructors. May be repeated for credit with specific topic. P/NP or letter grading.

194. Research Group or Internship Seminars: Lesbian, Gay, Bisexual, and Transgender Studies. (2 to 4) Seminar, two hours. Preparation: completion of four courses toward major or minor; course 191T or course 191E. Corequisites: course 195. Designed for seniors who are doing internship in lesbian, gay, bisexual, and transgender organization. Discussion of organization theoretical and political issues in context of internship and relation of those issues to ideas explored in minor courses already taken. May be repeated for credit. P/NP grading.

195. Community or Corporate Internships in Lesbian, Gay, Bisexual, and Transgender Studies. (4) Tutorial, one hour. Preparation: completion of four courses toward minor. Corequisite: course 191E. Corequisite: course 194. Limited to seniors. Internship in supervised setting in lesbian, gay, bisexual, or transgender community organization. Students meet on regular basis with instructor and provide periodic reports of their experience. May be repeated for credit. Individual contract with supervising faculty member required. P/NP or letter grading.

197. Individual Studies in Lesbian, Gay, Bisexual, and Transgender Studies. (2 to 4) Tutorial, one hour. Preparation: courses 191E and 194. Limited to juniors/seniors. Directed program of independent study or research on specific topic within lesbian, gay, bisexual, and transgender studies, with scheduled meetings to be arranged between faculty member and student. Tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

LIFE SCIENCES

College of Letters and Science

222 HERSHEY HALL
BIOLOGY 957246
LOS ANGELES, CA 90095-7246
310-825-6614
LSCORE@LIFESCI.UCLA.EDU
HTTPS://Www.LSCORE.UCLA.EDU
FRANK A. LASKI, PH.D, DIRECTOR

SCOPE AND OBJECTIVES

Students who wish to study life sciences have a choice of eight majors, all of which lead to a Bachelor of Science degree: Biology, Ecology, Behavior, and Evolution, and Marine Biology (Ecology and Evolutionary Biology Department), Microbiology, Immunology, and Molecular Genetics (Microbiology, Immunology, and Molecular Genetics Department), Molecular, Cell, and Developmental Biology (Molecular, Cell, and Developmental Biology Department), Neuroscience (Neuroscience Interdepartmental Program), Physiological Science (Integrative Biology and Physiology Department), and Psychology (Psychology Department). This choice reflects the diversity of undergraduate instruction in life sciences at UCLA. Despite this diversity, all of these majors require a common core of introductory courses that forms the foundation for any study of life sciences and that is required for more advanced courses in each major. The common core includes courses in chemistry, physics, and mathematics, as well as introductory courses in molecular biology, physiology, and organicism. In addition, the core introduces biological models, molecular biology, and genetics. During the first two years, students may also gain experience in a research laboratory through the Student Research Program. For more information on each major, see the individual departmental listings in this section of the catalog. For additional information on the life sciences core curriculum, see the curriculum website.

Students considering one of the life sciences majors are encouraged to declare a major as early as possible, even in their first year. In this way, they are identified by the life sciences ad-

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Students considering one of the life sciences majors are encouraged to declare a major as early as possible, even in their first year. In this way, they are identified by the life sciences ad-
Visiting offices and receive important curricular and other information. Because the core curriculum prepares them for any of the eight majors, they have the flexibility to switch to another life sciences major at any time during their progression through the core curriculum. Note: The Marine Biology and Psychobiology majors may require some courses in addition to the life sciences core curriculum as part of the preparation. Consult the course requirements for both majors.

Undergraduate Study

Life Sciences Core Curriculum

Required: Chemistry and Biochemistry 14A, 14B, 14BL, 14C, and 14D, or 20A, 20B, 20L, 30A, 30AL, 30B; Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A, or Life Sciences 30A, 30B, and Statistics 13; Physics 1A, 1B, 1C, 4AL, and 4BL, or 5A, 5B, and 5C.

Students must also complete one of two life sciences sequences—either Life Sciences 1, 2, 3, 4, and 23L OR 7A, 7B, 7C, 23L, and 107. They may not substitute courses in either sequence. Each core curriculum course must be passed with a grade of C- or better, and all courses must be completed with an overall grade-point average of 2.0 or better. Students receiving a grade of D or F in two core curriculum courses, either in separate courses or repetitions of the same course, are subject to dismissal from the major.

Transfer Students

Transfer applicants with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of general biology with laboratory for majors, preferably equivalent to Life Sciences 1 and 2 OR 7A, 7B, and 7C, one year of calculus, one year of general chemistry with laboratory for majors, and one semester of organic chemistry with laboratory. A second semester of organic chemistry or one year of calculus-based physics is strongly recommended but not required for admission.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

Undergraduate Research Consortium in Functional Genomics

The Undergraduate Research Consortium in Functional Genomics (URCFG) offers a sequence of laboratory-intensive courses designed for undergraduate students committed to pursuing research. The innovative partnership between UCLA and the Howard Hughes Medical Institute (HHMI) was formed through a major award to Professor Utpal Banerjee. The HHMI Professors Program seeks to engage leadng scientists in transmitting the excitement and values of scientific research to undergraduate education. The goal of the URCFG is to emphasize the importance for academia and industry of research in the fields of medicine and biotechnology.

Sponsored by the Life Sciences Core, the URCFG provides undergraduate students from any UCLA major with the opportunity to learn biological research techniques early in their educational careers and within a structured institutional environment. Students devote between one and four terms to the study of biological research in genetics, bioinformatics, and functional genomics. The training emphasizes research concepts in basic science such as the model organism and in advanced research techniques such as electron microscopy.

Students participate in one structured lower-division course—Biomedical Research 10H—which is limited to 30 students per term and is offered every term. After satisfactorily completing course 10H and with instructor consent, students may participate in up to three terms of upper-division research in genes, genetics, and genomics. The upper-division courses—Life Sciences 100HA, 100HB, 100HC—do not involve pre-existing laboratory experiments. Syllabi for the courses are instead based on individual research projects with the outcomes that students discover through the course of their studies. It is anticipated that only about one third of the students who complete course 10H will subsequently enroll in course 100HA, and students are advised that they can benefit significantly from course 10H alone.

Each course must be taken for a letter grade. Under special circumstances, one course may be waived for students who have prior research experience in fields covered by the courses. Students who complete the required courses receive a certificate of merit indicating their completion of the consortium.

To participate, students must be accepted into the Undergraduate Research Consortium in Functional Genomics. Interested students should contact the URCFG coordinator in the Marine Biology, Cell, and Developmental Biology Student Affairs Office, 128A HERSHEY HALL, 310-825-7109, for information regarding admission and an application. Applications are due no later than Friday of the fourth week of the term prior to the term in which students plan to enroll in course 10H.

Life Sciences

Lower-Division Courses

1. Evolution, Ecology, and Biodiversity. (5) Lecture, three hours; laboratory, two hours; one field trip. Introduction to principles and mechanisms of evolution by natural selection; population, behavioral, and community ecology; and biodiversity, including major taxa and the components of biodiversity, physiological relationships. P/NP or letter grading.

2. Cells, Tissues, and Organs. (4) Lecture, three hours; discussion, 75 minutes. Enforced prerequisite: Chemistry 14A or 20A. Introduction to basic principles of cell structure, organization of cells into tissues and organs, and principles of organ systems. Letter grading.

3. Introduction to Molecular Biology. (4) Lecture, three hours; discussion, 75 minutes. Requisite: course 2 (enforced). Chemistry 14C or 30A (may be taken concurrently). Corequisite: course 23L (students must take 23L concurrently with course 3 if they do not plan to take course 4). Introduction to basic principles of biochemistry and molecular biology. Letter grading.


5. Cell and Molecular Biology. (5) Lecture, three hours; discussion, 75 minutes. Introduction to basic principles of cell structure and cell biology, biochemistry, and molecular biology. P/NP or letter grading.


7. Physiology and Human Biology. (5) Lecture, three hours; discussion, 75 minutes. Enforced prerequisite: course 7B. Organization of cells into tissues and organs and principles of physiology of organ systems. Introduction to human genetics and genomics. Letter grading.

15. Life: Concepts and Issues. (5) Lecture, three hours; discussion, two hours. Introduction to important concepts and issues in the field for non-life sciences majors. Topics include chemistry of life, genetics, physiology, evolution, and ecology—all explored in lecture and debates, with a writing component. P/NP or letter grade.

15L. Life: Concepts and Issues Laboratory. (1) Laboratory, two hours. Requisite or corequisite: course 15. Broad introduction to biology, with focus on scientific literacy and thinking. Topics include scientific thinking and decision making to interpret and analyze data, evolution and genetics, physiology (chemistry, nutrition, reproduction, endocrinology, and neurobiology), and human behavioral biology. Letter grading.

20. Quantitative Concepts for Life Sciences. (5) Lecture, three hours; discussion, two hours. Preparation: three years of high school mathematics (algebra II), some familiarity with computers. Introduction to a variety of quantitative concepts that are relevant to biology. Designed to enhance quantitative skills that are essential for success in life sciences, chemistry, mathematics, and physics courses that make up core curriculum for life sciences majors at UCLA. Biological examples used throughout to gain appreciation of relevance of mathematics to biology. Letter grading.

23L. Introduction to Laboratory and Scientific Methodology. (3) Laboratory, three hours; discussion, one hour. Requisite: course 2 or 7B. Recommended to be taken concurrently with course 3, 4, or
7C. Introductory life sciences laboratory designed for undergraduate students. Opportunity to conduct wet laboratory cutting-edge bioinformatics laboratory experiments. Students work in groups of three conducting experiments in areas of physiology,metabolism, cell biology, molecular biology, genotyping, and bioinformatics. Letter grading.

30A. Mathematics for Life Scientists. (5) Lecture, three hours; laboratory, one hour. Preparation: three years of high school mathematics (to algebra II), some basic familiarity with computers. Mathematical modeling as tool for understanding dynamics of biological systems. Fundamental concepts of single-variable calculus, mathematical presentations, single- and multivariable differential equations modeling of dynamic processes in ecology, physiology, and other subjects in which quantities change with time. Use of free computer program, Green Sage for problem solving, plotting, and dynamical simulation in laboratory. Letter grading.

30B. Mathematics for Life Scientists. (5) Lecture, three hours; laboratory, two hours. Enforced requisite: course 30A. Introduction to concept of matrices and linear transformations to equip students with some basic tools to understand dynamics of multivariable nonlinear systems. Examples from ecological, physiological, chemical, and other systems. Letter grading.

97. Variable Topics in Life Sciences. (1 to 4) Seminar, to be arranged. Preparation: Current issues in research and/or development in life sciences. Consult Schedule of Classes for topics and instructors. May be repeated once for credit with consent of instructor. P/NP or letter grading.

98XA. PEERS Collaborative Learning Workshops for Life Sciences Majors. (1) Seminar, three hours. Corequisite: course 30A. Limited to Program for Excellence in Education and Research in Science (PEERS) students. Development of intuition and problem-solving skills in collaborative learning environment. May be repeated three times, but only 1 unit may be applied toward graduation. P/NP grading.

98XB. PEERS Collaborative Learning Workshops for Life Sciences Majors. (1) Seminar, three hours. Corequisite: course 30B. Limited to Program for Excellence in Education and Research in Science (PEERS) students. Development of intuition and problem-solving skills in collaborative learning environment. May be repeated three times, but only 1 unit may be applied toward graduation. P/NP grading.

Upper-Division Courses


110. Career Exploration in Life Sciences. (2) Formerly numbered 5.) Seminar, two hours. Recommended for sophomore and incoming transfer students. Designed to help life sciences students expand awareness of their interests, needs, and skills to make deliberate career choices. Introduction to many components that go into making effective career decisions to help students explore diversity of career options for life sciences majors. P/NP grading.

130. Science Classroom Observation and Participation. (1) Seminar, one hour. Preparation: completion of three mathematics and/or science courses at level required of science majors. Observation, participation, and assisting in science classes at elementary, middle, and secondary schools. May be repeated for credit. P/NP grading.

M174. Health Disparities. (4) (Same as Psychology M174.) Lecture, three hours. Examination of health disparities and ways in which societal responses to race and ethnicity in combination with variety of other factors, such as socioeconomic quality and access to healthcare resulting in poor health outcomes in racial/ethnic minorities. Basic foundation for critical thinking about assumptions that shape life sciences, medical research, clinical practice, and social and behavioral sciences as they relate to racial and ethnic minority populations and to teach students to integrate concepts of culture and health disparities into other social, biological, political, psychological, genetic, and clinical health interests. P/NP or letter grading.

192A. Undergraduate Practicum in Life Sciences. (4) Seminar, two hours; laboratory, three hours. Enforced requisite: course 23L. Limited to sophomores/juniors/seniors. Introductory training and supervised practicum in laboratory setting for advanced undergraduate students in courses related to life sciences. Students work on oral presentation and professional communication skills, with constant assessment of progress. Resources provided for undergraduate students to improve their public speaking abilities under guidance of faculty members. Letter grading.

192B. Undergraduate Practicum in Life Sciences. (4) Seminar, two hours; laboratory, three hours. Enforced requisite: courses 23L, 192A. Limited to sophomores/juniors/seniors. Advanced training and supervised practicum in laboratory setting for experienced undergraduate students in courses related to life sciences. Students refine their professional skills and take leadership roles in mentoring students under guidance of faculty members. Students gain understanding of how to develop academic courses in life sciences, including design of group activities, curriculum development, and assessment of student learning. Letter grading.

192C. Undergraduate Practicum in Life Sciences. (4) Seminar, two hours. Enforced requisite: course 4. Limited to sophomores/juniors/seniors. Training and supervised practicum in development of problem-solving skills and intuition in genetics in collaboration learning environment for advanced undergraduate students in courses related to life sciences. Students work on oral presentation skills and assist in preparation and presentation of materials and development of programs under guidance of faculty members. May be repeated once for credit. Letter grading.

192D. Undergraduate Practicum in Life Sciences. (4) Laboratory, two hours; activity, two hours. Enforced requisite: courses 30A, 30B. Limited to sophomores/juniors/seniors. Introductory training and supervised practicum for advanced undergraduate students in courses related to mathematics for life sciences. Students work on oral presentation and professional communication skills, with constant assessment of progress. Resources provided for undergraduate students to improve their public speaking abilities under guidance of faculty members. May be repeated for credit. Letter grading.

192E. Undergraduate Practicum in Life Sciences. (4) Laboratory, two hours; activity, two hours. Enforced requisite: courses 30A, 30B, 192D. Limited to sophomores/juniors/seniors. Advanced training and supervised practicum for experienced undergraduate students in courses related to mathematics for life sciences. Students refine their professional skills and take leadership roles in mentoring students under guidance of faculty members. Students gain understanding of how to develop academic courses in life sciences, including design of group activities, curriculum development, and assessment of student learning. May be repeated for credit. Letter grading.

192F. Learning Assistant Program in Life Sciences Core. (4) Seminar, three hours; activity, one hour. Enforced requisite: course 3. Limited to sophomores/juniors/seniors. Training and supervised practicum for advanced undergraduate students who assist in preparation of materials and development of innovative instruction methods with guidance of faculty members in small course settings. Students trained in current topics in pedagogy and education research. May be repeated twice for credit. P/NP or letter grading.

192G. Learning Assistant Pedagogy. (1) Seminar, one hour. Limited to sophomores/juniors/seniors. Training and supervised practicum seminar for advanced undergraduate students who are learning assistants (LAs) or peer learning facilitators (PLFs). Exploration of current topics in pedagogy and education research. P/NP or letter grading.

Scope and Objectives

The goal of the Department of Linguistics is the enrichment of knowledge about the nature, grammar, and history of human language. Linguistics is a theoretical discipline, akin to philosophy, anthropology, and cognitive psychology. It is important for prospective students to understand that studying linguistics is not a matter of learning to speak many languages. Linguistics courses draw examples from the grammars of a wide variety of languages, and
the more languages linguists know about in depth (as distinct from possessing fluency in the use of them), the more likely they are to discover universal properties. It is also possible to pursue these universal aspects of human language through the intensive in-depth study of a single language. This accounts for the high proportion of examples from English and familiar European languages found in linguistics courses and research publications.

The core areas of linguistic theory are phonology (with its roots in phonetics), morphology, syntax, and semantics. A grammar is a system of rules that characterize the phonology, morphology, syntax, and semantics of a natural language. The properties of grammars are the central focus of linguistic theory.

Because language is central to all humanistic disciplines, as well as to several social sciences areas, it is studied from many points of view. Linguistics itself cannot be said to recognize a single optimal approach to the subject. Hence, the courses provide a variety of approaches that reflect the diversity of the field.

The Linguistics Department has consistently been ranked among the very best linguistics departments in the country. It offers programs leading to the Bachelor of Arts, Master of Arts, and PhD degrees.

Undergraduate Study

The majors described below are of three types: (1) a major that concentrates entirely on general linguistics, (2) several majors that combine the basic courses of the general program with a language concentration or other related fields, and (3) a major in Applied Linguistics. The combined majors in conjunction with instructional certification programs are especially appropriate for students who have non-university teaching careers as goals.

A 2.0 grade-point average in linguistics courses is required for all Linguistics Department majors.

Linguistics BA

Linguistics is the study of languages as a general phenomenon. It aims to help answer broad questions concerning the nature of human cognition and communication. Students will learn about language universals as well as the ways in which languages differ from one another in terms of their sound patterns, syntax, and the way they encode meaning. They will also learn about the linguistic theories explaining and constraining linguistic knowledge, informed in part by experimental investigations of child language acquisition and adult language processing. Successful graduates will receive a cognitive science education with a focus on language; they will develop skills in data analysis, analytic reasoning, and experimental methods.

Preparation for the Major

Required: Linguistics 20; two of the following: Philosophy 31, Psychology 10 (or 100A), one cultural anthropology course; completion of the equivalent of the sixth term of one foreign language and the third term of a second foreign language.

Students who complete an advanced language course are considered to have completed the equivalent of whatever courses are required to that (e.g., if students complete French 100, they have automatically satisfied the requirement of the sixth term of work in one language). Students are required to complete at least the equivalent of the third term in a language other than those in the Romance, Slavic, or Germanic families. This requirement may be satisfied either as part of or in addition to the language requirement described in the preceding paragraph.

Transfer Students

Transfer applicants to the Linguistics major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one introduction to linguistics course, two courses from symbolic logic, introductory psychology or psychological statistics, or cultural anthropology, and two years of one foreign language and one year of a second foreign language (at least one year must be in a language other than those in the Romance, Slavic, or Germanic families). Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Eleven upper-division or graduate courses, including Linguistics 103, 120A, 120B, two courses from 110, 120C, and 130 (or 132), and two courses from 165A, 165B, 165C (students may substitute courses 200A, 200B, and 200C for 165A, 165B, and 165C respectively if they receive grades of A in 120A, 120B, and 120C respectively and have consent of instructor). Courses 165A, 165B, and 165C, or 200A, 200B, and 200C, are recommended for students planning linguistics graduate work. The remaining four courses are electives, three of which must be linguistics courses (no more than one course from 197, 198A, and 199 may be applied toward the major). The other course may be in linguistics or in another field as follows: Classics 180, English 113A, 113B, Philosophy C127A, C127B, 172, Psychology 120A, 124E, 133C, or an upper-division course in a foreign language beyond the sixth term. Nonlinguistics courses not on the list may be used as electives only in consultation with an adviser.

Linguistics 198A and 198B, or 199, are recommended for students planning to pursue graduate work in linguistics, since they provide an opportunity to engage in independent research and to write a paper that can be submitted to graduate admissions committees. To enroll in the courses, students must consult with the department senior essay and honors counselor.

Linguistics and Anthropology BA

The Linguistics and Anthropology major combines the basic courses of the general linguistics program with that of anthropology, the study of humankind. Students will learn linguistic theory, the study of the structure of human language generally. They will also learn the many ways in which language affects human history, social identity, social interaction, and politics. Successful graduates will be well acquainted with linguistic structure, language diversity, and language typology, as well as the anthropological and social consequences of the nature of human language.

Preparation for the Major

Required: Linguistics 20, completion of the equivalent of the sixth term of one foreign language and the third term of a second foreign language (at least three terms must be in a language other than those in the Romance, Slavic, and Germanic families). Anthropology 4 is strongly recommended, when offered.

Transfer Students

Transfer applicants to the Linguistics and Anthropology major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one introduction to linguistics course and two years of one foreign language and one year of a second foreign language (at least one year must be in a language other than those in the Romance, Slavic, or Germanic families). One cultural and communication course is strongly recommended.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Eleven upper-division courses as follows: Linguistics 102 (or 103), 110, 119A (or 120A), 119B (or 120B or 127), M146; two courses from 114, 120C, 144, 160, 161, 170; one course from Anthropology 151 or Sociology M124A; and three upper-division electives from the Anthropology 130 series (one course only), the 150 series (one course only), the 160 series (one course only), Sociology M124A, CM125, Linguistics 165A and 165B (or 200A and 200B with grades of A in 120A and 120B respectively and consent of instructor) are recommended for students planning to pursue graduate work in linguistics.

Applied Linguistics BA

The Applied Linguistics major investigates linguistic issues relevant to the everyday world, shedding light on the nature of language and language use. Students will learn linguistic theory, the study of the structure of human language generally. With its focus on service learning, students will also learn linguistic practice, engaging in the community, schools, and work places of our geographic setting. Successful graduates will be well acquainted with language use from a variety of perspectives and experiences, and will be able to apply this knowledge to a wide variety of practices including language teaching, speech pathology, and translation and interpretation.
Preparation for the Major

Required: Anthropology 4 or Psychology 10, Linguistics 11, 20, and completion of the equivalent of the sixth term of one foreign language.

Students who complete an advanced upper-division language course are considered to have completed the equivalent of whatever courses are requisite to that advanced language course (e.g., if students complete German 152, they have automatically satisfied the requirement of the sixth term of work in German).

Transfer Students

Transfer applicants to the Applied Linguistics major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of one foreign language, one introduction to linguistics course, one introduction to psychology course, and one introduction to linguistic anthropology course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Ten upper-division courses as follows: Linguistics 102 (or 103), 119A (or 120A), 119B (or 120B), 120C, 130 or C140, two courses selected from Linguistics 104, M141, 144, M146, 170, 191B, two upper-division elective courses taught in the Linguistics Department, and five courses selected from Anthropology 131, 152P, 152Q, 153, 153P, 154P, 154Q, 155A, 155W, 157W, 159, Applied Linguistics 102W, M135, Arabic 180, 181, Armenian 110, Chicana and Chicano Studies 164SL, M167SL, M170SL, Constructions 119, M125, M144A, French 105, German 140, Hebrew 180A, 180B, Italian 131, Linguistics 114, M116, M146, M176A, M176B, M177, M178, Portuguese 100A, 100B, Slavic CM114, Spanish 100A, 100B, 160.

Only one course may be selected from Anthropology 149A through 149F. No more than one service learning course may be applied toward the major.

Linguistics and Asian Languages and Cultures BA

The major combines the basic courses of the general linguistics program with that of East Asian languages and cultures. Students are able to study the civilizations of China, Korea, Japan, and India; and enrich their knowledge about the nature, grammar, and history of human language at the same time.

Preparation for the Major

Required: Completion of the sixth term in either Chinese, Japanese, or Korean; Linguistics 20; one cultural anthropology course; either Chinese 50, Japanese 50, or Korean 50, as appropriate; completion of the equivalent of the third term of a second foreign language.

Transfer Students

Transfer applicants to the Linguistics and Asian Languages and Cultures major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of either Chinese, Japanese, or Korean, one introduction to linguistics course, one cultural anthropology course, one Chinese, Japanese, or Korean civilization course, and one year of a second foreign language.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major


Linguistics and Computer Science BA

The major combines the basic courses of the general linguistics program with that of computer science, accommodating students who want professional preparation in computer science but do not necessarily have a strong interest in computer systems hardware. The goal of linguistics is the enrichment of knowledge about the nature, grammar, and history of human language. Linguistics is a theoretical discipline, akin to philosophy, anthropology, and cognitive psychology.

Preparation for the Major

Required: Linguistics 20, Computer Science 31, 32, 33, 35L, Mathematics 31A, 31B, 61, Philosophy 31, completion of the third term in one foreign language.

Transfer Students

Transfer applicants to the Linguistics and Computer Science major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one introduction to linguistics course, two calculus courses, one symbolic logic course, four computer programming courses, and two years of one foreign language or one year in each of two foreign languages. One discrete structures course is recommended.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Eleven upper-division courses as follows: Linguistics 102 (or 103), 119A (or 120A), 120B, 120C, 165A (or 165B or 165C), 185A, one course selected from 104, 127, 132, 152, 165A, 165B, 165C, 180, 185B, Computer Science 131, 132 or 161, 180, 181.

Linguistics and English BA

The major combines the basic courses of the general linguistics program with that of English. Students are able to study the literatures and cultures of those parts of the world in which English is the primary language, the history and structure of the English language itself, and enrich their knowledge about the nature, grammar, and history of human language at the same time.

Preparation for the Major

Required: Linguistics 20, English 4W (or 4HW), 10A, 10B, 10C, Philosophy 31, completion of the equivalent of the sixth term of one foreign language and the third term of a second foreign language.

Transfer Students

Transfer applicants to the Linguistics and English major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one introduction to linguistics course, one critical reading and writing course, one year of English literature survey courses, one symbolic logic course, and two years of one foreign language and one year of a second foreign language.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Twelve upper-division courses as follows: Linguistics 103, 110, 120A, 120B, 165A or 165B (or 200A or 200B with a grade of A in 120A or 120B respectively and consent of instructor), one upper-division elective in linguistics, English 113A, 113B, 120, and three electives from 140A, 140B, 150A, 150B, 151, the 150 series (one course only), the 160 series (one course only), the 170 series (one course only).

Linguistics and French BA

The major combines the basic courses of the general linguistics program with that of French. Students are able to gain practical competence and basic knowledge of French, and enrich their knowledge about the nature, grammar, and history of human language at the same time.

Preparation for the Major

Required: Linguistics 20, French 1, 2, 3, 4, 5, 6, 12, completion of the equivalent of the third term of a second foreign language.

Transfer Students

Transfer applicants to the Linguistics and French major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of French, one introduction to
linguistics course, one French literature course, and one year of a second foreign language.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Eleven upper-division courses as follows: Linguistics 103, 110, 120A, 120B, 165A (or 165B), one upper-division elective in linguistics, French 100, 101, 105, 107, and one elective upper-division French course beyond the sixth term.

Linguistics and Italian BA

The major combines the basic courses of the general linguistics program with that of Italian. Students are exposed to Italian civilization, language and literature as well as enrich their knowledge about the nature, grammar, and history of human language at the same time.

Preparation for the Major

Required: Linguistics 20, Italian 1, 2, 3, 4, 5, 6, Latin 1, 2, 3, one cultural anthropology course.

Transfer Students

Transfer applicants to the Linguistics and Italian major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of Italian, one year of Latin, one introduction to linguistics course, and one cultural anthropology course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Twelve upper-division courses as follows: Linguistics 102 (or 103), 119A (or 120A), 120B, 120C, 165B (or 165C or 180), one upper-division elective in linguistics; six upper-division courses in philosophy, including at least five from Philosophy 124 through 135, 170, 172, 174, 180, 181, 184, of which at least two must be from 127A, 127B, 172.

Linguistics and Psychology BA

The major combines the basic courses of the general linguistics program with that of psychology. Students are able to study and explain human and animal behavior; both normal and abnormal, as well as enrich their knowledge about the nature, grammar, and history of human language.

Preparation for the Major

Required: Linguistics 20, Psychology 10, 85, 100A, 100B, completion of the equivalent of the sixth term of one foreign language and the third term of a second foreign language. Program in Computing 10A is strongly recommended.

Transfer Students

Transfer applicants to the Linguistics and Psychology major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one introduction to linguistics course, one introduction to psychology course, one introduction to cognitive science course, one psychological statistics course, one psychology research methods course, and two years of one foreign language and one year of a second foreign language. One introduction to programming course is strongly recommended.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Eleven upper-division courses (six in linguistics and five in psychology) as follows: Linguistics 102 (or 103), 119A (or 120A), 119B (or 120B), two of 130, 132, and 135, and one upper-division elective in linguistics (multiple-listed courses may not be applied). Linguistics 165A, 165B, and whichever of 130, 132, and 135 has not been used to satisfy the requirement, are strongly recommended. Also required are Psychology 120A, 121, 133B, and two electives to be selected from 115, 116, M117C, 118, M119L, 124A, 124B, 124C, 124E, 130, 133C, 133E, 133F, 186A, 186B.

Linguistics and Scandinavian Languages BA

The major combines the basic courses of the general linguistics program with that of Scandinavian languages. Students are able to learn about Scandinavia through the study of its languages and literatures, as well as enrich their knowledge about the nature, grammar, and history of human language.

Preparation for the Major

Required: Linguistics 20, Scandinavian 1, 2, and 3, or 11, 12, and 13, or 21, 22, and 23, completion of the equivalent of the third term of a second foreign language.

Transfer Students

Transfer applicants to the Linguistics and Scandinavian Languages major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of either Swedish, Norwegian, or Danish, one introduction to linguistics course, and one year of a second foreign language.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Eleven upper-division courses as follows: Linguistics 103, 110, 120A, 120B, 165A or 165B (or 200A or 200B with a grade of A in 120A or 120B respectively and consent of instructor), two upper-division electives in linguistics, Italian 102A, 180, and three upper-division electives in Italian.

Linguistics and Philosophy BA

The major combines the basic courses of the general linguistics program with that of philosophy, for students who are reflective about their beliefs or who wish to become so. Students enrich their knowledge about the nature, grammar, and history of human language, and are given the opportunity to ponder the foundations of almost any other subject to which they are exposed—whether history, religion, government, law, or science.

Preparation for the Major

Required: Linguistics 20, Philosophy 31, and two courses from 1, 6, 7, 21, completion of the equivalent of the sixth term of one foreign language and the third term of a second foreign language.

Transfer Students

Transfer applicants to the Linguistics and Philosophy major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one introduction to linguistics course, and two upper-division electives in linguistics beyond the sixth term.
The Major

Required: Twelve upper-division courses as follows: Linguistics 103, 110, 120A, 120B, 165A (or 165B), one additional upper-division course in linguistics, Spanish 100A, 100B, 119, 160, and two additional upper-division Spanish courses.

Honors Program

Departmental honors are awarded at graduation to those students who have a grade-point average of 3.6 or better in their junior and senior years and who have received a grade of A in Linguistics 198A and 198B or in 199. Qualified students may be proposed by any member of the faculty to the faculty as a whole for the award of highest honors on the basis of a piece of research in linguistics completed at UCLA.

Computing Specialization

Students in any of the departmental majors (except Linguistics and Computer Science) may select a specialization in Computing by (1) satisfying all the requirements for a bachelor’s degree in the specified major and (2) completing Program in Computing 10A and 10B and 10C (or Computer Science 31 and 32), Linguistics 185A, Mathematics 61, and one course selected from Linguistics 104, 127, 132, 165A, 165B, 165C, 180, 185B. Students graduate with a bachelor’s degree in their major and a specialization in Computing.

Linguistics Minor

The Linguistics minor is designed for students whose training in linguistics analysis could be an enhancement to their major programs and to students who are interested in language(s) but do not have time in their undergraduate programs to pursue multiquarter language sequences. In addition, the minor provides students with a way to design custom joint degrees with linguistics where the Linguistics Department does not have an existing joint degree program combining linguistics and another field.

To enter the minor, students must have an overall grade-point average of 2.0 or better.

Required Lower-Division Course (5 units): Linguistics 20.

Required Upper-Division Courses (27 to 30 units): Six courses, which must include Linguistics 102 (or 103), 119A (or 120A), 119B (or 120B), two elective courses selected from 104 through 185B, and an additional elective linguistics course, which may be upper-or lower-division.

Students who plan to complete the 165 course series must first take the corresponding 120 course series. A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Linguistics offers Master of Arts (MA), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Linguistics.

American Sign Language

Lower-Division Courses


Upper-Division Courses

M115. Enforcing Normalcy: Deaf and Disability Studies. (4) (Same as Disability Studies M115.) Lecture, three hours. Exploration of historical, medical, social, political, philosophical, and cultural influences that have constructed categories of normality, disability, and deafness. Building on writing of Michel Foucault and critical work in field of disability studies, inquiry into institutions that have enforced standards of normalcy throughout 19th and 20th centuries to present. Primary attention to rise of medical authority in West, history of eugenics, and contemporary bioethics issues confronting disability and deaf communities. P/NP or letter grading.

M120. History of Deaf Communities in America. (4) (Same as History M147E.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of history and culture of deaf communities in America (circa 1800 to present) by exploring major events impacting deaf people, including development of sign language, deaf education, autism, politics, disability rights, deaf revolution movements, and role of hearing technology. Historical development of emergence, growth, and survival of America’s deaf community and development of deaf identity over time. P/NP or letter grading.

121. History of Mass Media and Deaf Community. (4) Lecture, three hours. Historical survey of mass media (print, film, television, and Internet) as sources and interpreters of deafness and deaf people within context of U.S. social and cultural history. Examination of historical changes in products of mass media within deaf community and ways of critiquing media sources. P/NP or letter grading.

Linguistics

Lower-Division Courses

1. Introduction to Study of Language. (5) Lecture, three hours; discussion, one hour. Summary, for general undergraduates, of what is known about human language; unique nature of human language, its structure, its universalities, and its diversity; language in its social and cultural settings; language in relation to other aspects of human inquiry and knowledge. P/NP or letter grading.


4. Language and Evolution. (5) Lecture, four hours; discussion, one hour (when scheduled). Basic concepts and tools of evolutionary theory and linguistics relevant to how organisms with linguistic abilities could evolve, and how particular languages, as cultural artifacts, survive and change so rapidly. P/NP or letter grading.

5. World Languages. (5) Lecture, four hours; discussion, one hour (when scheduled). Introduction to linguistic diversity of world and to such core areas of linguistics as sound production and patterning (phonetics and phonology), word formation (morphology), and sentence formation (syntax). Structural characteristics of world languages and methods of classifying languages into families and types. Detailed discussion of representative languages with audiovisual illustrations to acquaint students with distinctive features of several key language families. Discussion of such linguistic concepts as pidgins and creoles, unaffiliated languages, language contact, and language endangerment, together with related sociopolitical issues. P/NP or letter grading.

6. Out of Mists of Babes. (4) Lecture, six hours. How children acquire language, most complex of human cognitive achievements. Look at amazing linguistic abilities of infants and their first production and comprehension of speech sounds, then investigation of how children learn words and rules for producing and understanding sentences. Language acquisition in special populations such as children acquiring sign languages, bilingual children, and people acquiring language beyond critical period. Focus mainly on English, with consideration of other languages. Offered in summer only. P/NP or letter grading.

8. Language in Context. (4) Lecture, four hours; discussion, one hour (when scheduled). How is meaning of language influenced by world around us? Introduction to pragmatics, speech acts, ordinary language philosophy, and linguistic relativity. Good foundation for students of linguistic theory, philosophy, sociology, anthropology, and communication studies. P/NP or letter grading.

9W. Linguistic Humor: Amusing and Abusing with Language. (5) Seminar, five hours. Recapitulate: English Composition 3. Study of how principles of science of linguistics are applied in analyzing language structure. Data from humor and other amusements, such as street lingo. Introduction to basics of linguistics analysis, including language sound systems, syntactic analysis, word structure,
have not previously heard them and how do speakers know that particular words are well-formed or ill-formed? Is there principled distinction in traditional di-
vision between inflection and derivation? how can we best account for variation in forms that are same (e.g., seat, seat), and which ones are different? can we formulate crosstitle generalizations about word structure? P/NP or letter grading.

110. Introduction to Historical Linguistics. (5) Lec-
ture, four hours; discussion, one hour (when sched-
uled). Requisites: courses 20, 102 or 103, 119A or 120A. Methods and theories appropriate to historical study of language, such as comparative method and methods of internal reconstruction. Sound change, grammatical change, semantic change. P/NP or letter grading.

110G. Introduction to Historical Linguistics for Graduate Students. (2) Lecture, four hours. Limited to and designed for entering linguistics graduate stu-
dents to help remedy entrance deficiencies in histori-
cal linguistics. Basic historical linguistics: methods and theories appropriate to historical study of lan-
guage, such as comparative methods and method of internal reconstruction. Sound change, grammatical change, semantic change. S/U grading.

111. Intonation. (4) Lecture, two hours; laboratory, two hours. Requisites: courses 20, 102 or 103, one course from 119A, 119B, 120A, or 120B. Recom-
mended: course 104 or 204A. Survey of syntactic theory for English and other languages, with particular emphasis on phonological models of intonation. Lab-
oration: analysis of recording and analyzing intonation, and students learn to transcribe intona-
tional elements. Letter grading.

114. American Indigenous Linguistics. (5) Lecture, four hours; discussion, one hour (when scheduled). Strongly recommended preparation: course 20. Survey of genetic, areal, and typological classifications of American indigenous languages; writing sys-
tems for American indigenous languages; American indigenous languages in social and historical context. One or more languages may be investigated in detail. P/NP or letter grading.

116. Introduction to Japanese Linguistics. (4) (Same as Japanese M120.) Lecture, three hours; dis-
cussion, one hour. Enforced requisite: Japanese 3 or 8 or Japanese placement test. Introduction to Japa-
nese grammar and sociolinguistics through reading, discussion, and analysis of Japanese sounds in phonology, syntax, semantics, and discourse pragmatics. Letter grading.


119B. Syntactic Structures. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: course 20 with grade of B– or better. Not open for credit to students with credit for course 102B. Focus on the structure of words, phrases, and sentences in Japanese, with emphasis on the interrelatedness of phonological and morphological phenomena. Further experience with the International Phonetic Alphabet (IPA). Application to language learning and teaching. Letter grading.

120A. Phonology I. (5) Lecture, four hours; discus-
sion, one hour (when scheduled). Prerequisite: course 20 with grade of B– or better. Course 120A is not requisite to 120B. Survey of the basic phonological and syn-
tactic structures in natural languages; emphasis on insight into nature of such structures rather than lin-
guistics formalization. P/NP or letter grading.

120C. Semantics I. (6) Lecture, four hours; discus-
sion, one hour (when scheduled). Prerequisite: course 120B. Survey of most important theoretical and de-
scriptive claims about nature of meaning. P/NP or letter grading.

127. Cognitive Typology and Universals. (5) Lec-
ture, four hours; discussion, one hour (when sched-
uled). Requisite: course 20. Study of essential similarities and differences among languages in grammatical dimensions. Use to signal and understand con-
cepts: relations between nouns and verbs (case and word order), negation, comparison, existence/locata-
ion/possesion, causation, interrogation, reflexiviza-
tion, modality, attribution/identification, time (tense and aspect), and (background) subordination. Data from a range of languages presented and analyzed. P/NP or letter grading.

C128A-C128B. Romance Syntax. French. (4-4) Lecture, four hours; preparation: some knowledge of French (or one Romance language). Enforced requi-
site: course 120B. Course C128A is enforced requi-
tite to C128B. Aspects of structure of French lan-
guage, with emphasis on properties of construction not found in English. Concurrently scheduled with courses C229A-C229B. P/NP or letter grading.

130. Language Development. (5) Lecture, four hours; discussion, one hour (when scheduled). Requi-
site: course 104 or 119A or 120B. Survey of research and theoretical perspectives in language development in children. Discussion and examination of child language data from English and other languages, with emphasis on properties of language development. Topics include infant speech perception and production, development of phonology, morphology, syntax, and word meaning. P/NP or letter grading.

132. Language Processing. (5) Lecture, four hours; laboratory, one hour (when scheduled). Requisites: courses 20, 119A or 120A, 119B or 120B. Central issues in speech and language comprehension, with emphasis on how theories in linguistics inform processing models. Topics include word under-
standing (with emphasis on spoken language), parsing, anaphora and inference, speech error models, and models of sentence production, and computation of syntactic structure during production. P/NP or letter grading.

C135. Neurolinguistics. (5) Lecture, four hours; dis-
cussion, one hour (when scheduled). Requisites: courses 20, 119A and 119B or 120A and 120B. Ex-
atmination of relationship between brain, language, and linguistic theory, with evidence presented from atypical language development. Ensis of disor-
ders in the mature brain. Topics include methodolo-
gies to investigate normal and atypical hemispheric specialization for language and children and adults with acquired and/or congenital language disorders. Concurrently scheduled with course C235. P/NP or letter grading.

C140. Bilingualism and Second Language Acquisi-
tion. (6) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: courses 119A or 120A, 119B or 120B. Introduction to theory of bilingualism and adult and child second language (L2) acquisition, with focus on understanding nature of L2 grammar and grammatical processes underlying L2/ bi-lingual acquisition. Discussion of neurolinguistic and social aspects of bilingualism. Concurrently sched-
uled with course C244. P/NP or letter grading.

M141. Current Methods of Language Teaching. (5) (Same as English Composition M141.) Lecture, four hours. Enforced requisite: course 20. Survey of theory and practice in teaching second languages, including (1) past and present methods used to teach second languages, (2) current theory and practice underlying skills-based instruc-
tion and integrated approaches, and (3) factors that affect second language acquisition and learning. De-
velopment of knowledge base in and rational base for design, development, implementation, and evaluation of second language instruction programs. P/NP or letter grading.
144. Fundamentals of Translation and Interpreting. (5) Formerly numbered M144.) Lecture, four hours; discussion, one hour. Recommended preparation: knowledge of English and at least one other language. Enforced requisite: course 20. Examination of salient lexical, structural, cultural, and social aspects of translating and interpreting between two languages or dialects. Survey of development of translation theories and rise of community interpreting and critical role of language planners. P/NP or letter grading.

M146. Language in Culture. (5) Same as Anthropology M150.) Lecture, three hours; discussion, one hour; fieldwork, two hours. Requisite: course 20 or Anthropology M146.) Lecture or language as aspect of culture; interaction of habitual thought and behavior to language; and language and classification of experience. Holistic approach to study of language, with emphasis on relationship of linguistic anthropology to fields of biological, cultural, and social anthropology, as well as archaeology. P/NP or letter grading.

M150. Introduction to Indo-European Linguistics. (5) Same as Indo-European Studies M150.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: course 1 or 20. Indo-European languages (ancient and modern), including their relationships, chief characteristics, writing systems, and sociocultural contexts. Nature of reconstructed Indo-European proto-language and proto-culture. One or more Indo-European languages may be investigated in detail. P/NP or letter grading.

150. Field Methods. (5) Lecture, four hours; discussion, one hour (when scheduled). Requisites: courses 102 or 103, 119A or 120A, 119B or 120B. Analysis of language unknown to members of class from data elicited from native speaker of that language. P/NP or letter grading.

161. Language Documentation. (5) Lecture, four hours; discussion, one hour (when scheduled). Requisite: courses 20 (enforced), and 105 or 119A or 120A. Issues in documenting languages, including collection of language data using linguistic field methods, organizing data into documents (annotated texts, dictionaries, multimedia presentations, technical articles), audiences for language documents (speakers of target languages, linguists, scholars outside linguistics, general public), presentation and storage of documents (paper publication, online publication, electronic and physical archives), documenting endangered languages, and organizations and initiatives for documenting endangered languages. Presentations focus on case studies. Student projects in assembling primary data and creating annotated texts with commentary. P/NP or letter grading.

165A. Phonology II. (5) Lecture, four hours; discussion, one hour (when scheduled). Requisite: course 120A. Interpretation following completion of course 120A or as soon as possible thereafter. Further study in phonological theory and analysis: autosegmental theory, syllable structure, metrical theory, interference of phonology and grammar. P/NP or letter grading.

165B. Syntax II. (5) Lecture, four hours; discussion, one hour (when scheduled). Requisite: course 120B. To be taken in term following completion of course 120B or as soon as possible thereafter. Recommended for students who plan to do graduate work in linguistics. Form of grammars, word formation, formal and substantive universals in syntax, relation between syntax and semantics, P/NP or letter grading.

165C. Semantics II. (5) Lecture, four hours; discussion, one hour (when scheduled). Requisite: course 120C. Recommended for students who plan to do graduate work in linguistics. Further study of semantics, logical relations between sentences, lexical semantics, tense and aspect, adverbs, modality and intensionality, P/NP or letter grading.

170. Language and Society: Introduction to Sociolinguistics. (4) Lecture, four hours; discussion, one hour (when scheduled). Requisite: course 20. Study of patterns of variation of language and society; social dialects and social styles in language; problems of multilingual societies. P/NP or letter grading.

175. Linguistic Change in English. (5) Lecture, four hours. Requisites: courses 110, 120A, 120B. Principles of linguistic change as exemplified through detailed study of history of English pronunciation, lexicon, and syntax. P/NP or letter grading.


M177. Structure of Korean. (4) Same as Korean CM125.) Lecture, three hours; discussion, one hour. Recommended preparation: two years of Korean, or one year of Korean and some knowledge of linguistics. Discussion of major syntactic, semantic, and pragmatic characteristics of Korean in light of linguistic universals, with brief introduction to formation, typological features, and phonological structure of Korean. Letter grading.


185A. Computational Linguistics I. (5) Lecture, four hours; laboratory, one hour. Requisites: courses 120B, Program in Computing 10C (or Computer Science 61A), Program in Computing 10C (or Computer Science 61B) or 106B or 106B (or 200B). Overview of formal computational ideas underlying kinds of grammars used in theoretical linguistics and psycholinguistics, and some connections to applications in natural language. Topics include recursion, relationship between probabilities and grammars, and parsing algorithms. P/NP or letter grading.

185B. Computational Linguistics II. (5) Lecture, four hours; laboratory, one hour. Requisite: course 185A. Extensions of basic language processing techniques to natural language processing. Recent models of syntax, semantic, and discourse analysis, with particular attention to their linguistic sophistication and psychological plausibility. P/NP or letter grading.

191A. Variable Topics Research Seminars: Linguistics. (4) Seminar, three hours. Requisite: course 1 or 20. Research seminar on selected topics. Reading, discussion, and development of culminating project. May be repeated for credit with topic change. P/NP or letter grading.

191B. Variable Topics Research Seminars: Linguistics. (2 or 4) Seminar, four hours. Research seminar on selected topics. Reading, discussion, and development of culminating project. May be repeated for credit with topic change. P/NP or letter grading.

192A-192B. Undergraduate Practicum in Linguistics. (4) Seminar, four hours. Enforced requisite: course 192A. Limited to juniors/seniors. Training and supervised practicum for advanced undergraduate students to assist in linguistics courses. Students assist in preparation of materials and development of innovative programs under guidance of faculty members and teaching assistants. May not be applied toward course requirements for any Linguistics Department major. Individual contract required. Information and contracts may be obtained from Linguistics Department. P/NP grading.

197. Individual Studies in Linguistics. (2 to 4) Tutorial, four hours. Requisite: course 1 or 20. Limited to juniors/seniors. Individual scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

198A. Honors Research in Linguistics I. (4) Tutorial, to be arranged. Requisite: course 198A. Limited to seniors. Preparation of honors thesis or comprehensive research project begun in course 198A under direct supervision of faculty member. Consult professor in charge to enroll. May be repeated for credit. Individual contract required. Letter grading.

198B. Honors Research in Linguistics II. (2) Tutorial, to be arranged. Requisite: course 198A. Limited to seniors. Continuation of honors thesis or comprehensive research project begun in course 198A under direct supervision of faculty member. Consult professor in charge to enroll. May be repeated for credit. Individual contract required. Letter grading.

199. Directed Research or Senior Project in Linguistics. (4) Tutorial, to be arranged. Limited to senior linguistics majors. Supervised individual research or investigation of linguistic topic selected by student under guidance of faculty mentor. Culminating paper required. Consult professor in charge to enroll. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200A. Phonological Theory I. (4) Lecture, four hours. Preparation: graduate linguistics student or grade of A in course 120A or equivalent course in phonology. Courses 200A and 200Aa form two-course survey of current research in phonological theory. Interaction of phonology with morphology and syntax, syllable structure stress, S/U or letter grading.

200B. Syntactic Theory I. (4) Lecture, four hours. Preparation: graduate linguistics student or grade of A in course 120B or equivalent course in syntax. In-depth introduction to selected topics in theory of constituent structure and syntax, argument structure, and grammatical relations. Topics include levels of representation, X-bar theory, case theory, thematic roles, the lexicon, grammatical function-changing rules, head-complement relations. S/U or letter grading.

200C. Semantic Theory I. (4) Lecture, four hours. Overview of current results and research methods in linguistic semantics. Topics include generalized quantifiers and semantic universals, semantic argument structure, variable binding and pronoun realization, formal semantic interpretation, syntax and LF, tense, ellipsis, and focus. Letter grading.

201A. Phonological Theory II. (4) Lecture, four hours. Requisite: course 200A. Continuation of course 200Aa. Second course in two-course survey of current research in phonological theory. Topics include underspecification, feature theory, underspecification, prosodic morphology, S/U or letter grading.

201B. Syntactic Theory II. (4) Lecture, four hours. Requisite: course 200B. In-depth introduction to selected topics in theory of constituent structure and syntax, argument structure, and topics selected from following areas: WH-movement and related rules, subjacency and other constraints on movement; ECP and related conditions on distribution of empty categories; recursive pronoun constructions; parametric variation in movement con-
structures; LF WH-movement; filters; reconstruction; parasitic gaps; barriers; control theory; null subject parameter. S/U or letter grading.


204A. Experimental Phonetics. (4) Lecture, three hours. Requisite: course 103. Use of laboratory equipment to investigate articulatory, acoustic, and perceptual properties of speech. Topics include experimental methods such as auditory measurement; analysis of acoustic structure of speech sounds; other components of grammars; and of acoustic theory of speech production; issues in perception of speech; nature and design of feature systems for phonetic and phonological analysis.

204B. Speech Production. (4) Lecture, three hours; laboratory, one hour. Requisite: course 104 or 204A. Survey of topics in speech production research, especially as related to linguistic phonetics. Topics include phonology of vocal tract and models of speech production and articulatory/ acoustic relations. Emphasis on use of laboratory methods such as aerodynamic transducers, electroglottography, static and electromagnetic articulography, and imaging techniques. S/U or letter grading.

204C. Speech Perception. (2 to 4) Lecture, four hours. Recommended requisite: course 104 (or 204A) or 111 (or 211). Limited to graduate students. Survey of topics in speech perception research. Topics include auditory physiology and psychophysics, categorial speech perception, and cross-linguistic speech perception and word recognition. Emphasis on use of experimental methods such as lexical decision, gating, priming, eye tracking, phoneme monitoring, and word spotting. S/U or letter grading.


209A. Computational Linguistics I. (5) Lecture, four hours; laboratory, one hour. Overview of formal computational models, including kinds of grammars used in theoretical linguistics and psycholinguistics. Themes include role of recursion, relationship between structure and interpretation (both PF and LF), relationship between grammars and probabilities, and relationship between derivations and parsing. S/U or letter grading.

209B. Computational Linguistics II. (5) Lecture, four hours; laboratory, one hour. Requisite: course 209A. Extensions of basic language processing techniques to natural language processing. Recent models of syntactic, semantic, and discourse analysis, with particular attention to the role of computational sophistication and psychological plausibility. S/U or letter grading.

209C. Computational Semantics. (4) Lecture, four hours. Preparation: basic knowledge of semantics. Requisite: course 185A or 209A. Study of algorithms to compute and reason with meanings of sentences and texts. Phenomena such as anaphor resolution, presupposition projection, and tracking time, objects, and space to be covered. S/U or letter grading.

210A. Field Methods I. (4) Lecture, four hours. Preparation: grade of B or better in course 103 or in examination on current linguistic theory. Requisites: courses 200A, 200B. Analysis of a language unknown to members of class from data elicited from a native speaker of the language. Term papers to be relatively full scale. Full credit only for S/U or letter grading.

210B. Field Methods II. (4) Lecture, four hours. Requisite: course 210A in preceding term. Because there are two sections, continuation must be in same section. May be repeated for credit with topic change. S/U or letter grading.

211. Intonation. (4) Lecture, two hours; laboratory, two hours. Requisite: course 120A or 120B. Survey of intonational theory for English and other languages, with particular attention to formal models of intonation. Laboratory equipment used for recording and analyzing intonation, and students learn to transcribe intonational elements. Letter grading.

212. Grammatical Theory. (4) Lecture, four hours. Survey of some of most significant results on capabilities of learners, given precise assumptions about their memory, time, and computational power, and precise assumptions about information provided by environment. S/U or letter grading.

213A. Grammatical Development. (4) Requisites: courses 200A, 200B. Recommended: course 130 or 233. Survey of theoretical perspectives and contemporary empirical research in development of syntax and other components of grammar, with particular emphasis on acquisition theory, linguistic theory, and issues of learnability.


213C. Linguistic Processing. (4) Lecture, four hours. Requisites: courses 165B and/or 200B. Recommended: courses 132 or 232. 201B. Survey of theoretical perspectives and experimental research in human processing of language (comprehension and/or production), with emphasis on syntactic processing, ambiguity resolution, effects of memory load, and relation between grammar and processor. S/U or letter grading.

214. Survey of Current Syntactic Theories. (4) Lecture, four hours. Requisite: course 201B. Survey of several current syntactic theories, compared with one another and with theory discussed in course 213B, from point of view of theories’ relative descriptive and explanatory power. S/U or letter grading.

215. Syntactic Typology. (2 or 4) Lecture, four hours. Requisite: course 200B. Current results in word-order universals; genetic classification of world’s languages; cross-language properties of specific construction types, including relative clauses, possessives, passive and negative coreference systems, agreement systems, deixis systems, and types of sentence complements. S/U or letter grading.

216. Syntactic Theory III. (4) Lecture, four hours. Requisite: course 201B. Selected topics on syntactic theories of anaphora and quantification from the following areas: typology of binding categories (pro-nouns, anaphors, etc.); theory of locality conditions in binding theory; parametric variation in binding; quantifier modification; existentials; quantification and unambiguous binding; strong and weak crossover; superlivity; scope interactions; complex quantifier structures. S/U or letter grading.

217. Experimental Phonology. (4) Lecture, four hours. Preparation: course 201B. Survey of experimental work that bears on claims about speakers’ knowledge of phonology, including theories of lexicon, relation between perception and phonology, and universal markedness relations. Letter grading.

218. Mathematical Structures in Language II. (4) Lecture, four hours. In-depth study of generalized quantifier theory; selected topics in formal syntax, formal semantics, formal pragmatics. May be repeated for credit with consent of instructor. S/U or letter grading.

219. Phonological Theory III. (4) Lecture, four hours. Requisite: course 201A. Current research and issues in phonological theory. Topics include structure of phonological representations, relations between representations, and acquisition of representations for phonological theory. S/U or letter grading.

220. Linguistic Areas. (4) Requisites: courses 120A, and 120B or 127. Recommended: courses 165A or 200A, 165B or 200B. Analysis and classification of languages spoken in a particular area (e.g., Africa, the Balkans, South Asia, Southeast Asia, Australia, Aboriginal North America, Aboriginal South America, Far East, etc.). May be repeated for credit with topic change.

225. Linguistic Structures. (4) Lecture, four hours. Requisites: courses 120A, and 120B or 127. Recommended: courses 165A or 200A, 165B or 200B. Phonological and grammatical structures of language and its genetic relationships to others of its family. May be repeated for credit with topic change. S/U or letter grading.

C228A-C228B. Romance Syntax: French. (4) Lecture, four hours. Preparation: some knowledge of French (or one Romance language). Enforced requisite: course 120B. Course C228A is enforced requisite to C228B. Aspects of structure of French language, with emphasis on properties of construction not found in English. Concurrently scheduled with courses C129A-C129B. S/U or letter grading.

230. History of Linguistics. (4) Requisites: courses 200A, 200B. Aspects of history of linguistics. Different courses may deal with different areas of linguistics (e.g., phonology, syntax) or with different historical periods. May be repeated for credit with topic change.

232. Language Processing. (5) Lecture, four hours; laboratory, one hour. Central issues in language comprehension and production, with emphasis on how theories in linguistics inform processing models. Topics include word order underivedness, universals; genetic classification of world’s languages; cross-language properties of specific construction types, including relative clauses, possessives, passive and negative coreference systems, agreement systems, deixis systems, and types of sentence complements. S/U or letter grading.

233. Survey of theoretical perspectives and contemporary empirical research in neurological and cognitive bases for language, language development, and language breakdown.

234. Current Syntactic Theories. (4) Lecture, four hours. Requisite: course 201B. Survey of several current syntactic theories, compared with one another and with theory discussed in course 213B, from point of view of theories’ relative descriptive and explanatory power. S/U or letter grading.

235. Syntactic Typology. (2 or 4) Lecture, four hours. Requisite: course 200B. Current results in word-order universals; genetic classification of world’s languages; cross-language properties of specific construction types, including relative clauses, possessives, passive and negative coreference systems, agreement systems, deixis systems, and types of sentence complements. S/U or letter grading.

236. Computational Phonology. (4) Lecture, four hours. Introduction to computational models of phonology and phonological acquisition. Topics include finite state machines, probabilistic automata, over-constrained models, dynamic programming methods. Letter grading.
260A-265B-265C. Seminars: Phonetics. (2 or 4 each) Seminar, three hours. Each course may be taken independently for credit. May not be applied toward MA or PhD degree requirements when taken for 2 units. May be repeated for credit. S/U grading.

261A-265B-265C. Seminars: Phonology. (2 or 4 each) Seminar, two hours. Each course may be taken independently for credit. May not be applied toward MA or PhD degree requirements when taken for 2 units. May be repeated for credit. S/U grading.

262A-262B. Seminars: Syntax and Semantics. (2 or 4 each) Seminar, three hours. Each course may be taken independently for credit. May not be applied toward MA or PhD degree requirements when taken for 2 units. May be repeated for credit. S/U grading.

264A-264B-264C. Seminars: Psycholinguistics/Neurolinguistics. (2 or 4 each) Seminar, three hours. Special topics may include child language, neurolinguistics, psycholinguistics, sociolinguistics, etc. Each course may be taken independently for credit. May not be applied toward MA or PhD degree requirements when taken for 2 units. May be repeated for credit. S/U grading.

265A-265B-265C. American Indian Linguistics Seminar. (1 or 4 each) Seminar, two hours; fieldwork, four hours. Presentation of research on American Indian linguistic each course may be taken independently for credit. May not be applied toward MA or PhD degree requirements when taken for 1 unit. May be repeated for credit. S/U grading.


276. Linguistics Colloquium. (No credit) Designed for graduate students. Same as course 275, but taken without credit by students not presenting a colloquium. S/U grading.

335. Teaching Apprentice Practicum. (1 to 4) Seminar, three hours. Each course may be repeated for credit. Letter grading.

338. Topics in Syntax and Semantics. (2) Seminar, four hours. Enforced requisite: course 201B. Course 201B, 201C, 214, 215, or 216 may be required. Specialized topics in language variation. May be repeated for credit. S/U grading.

351A. Topics in Phonetics and Phonology. (4) Seminar, four hours. Enforced requisite: course 200A. Course 201A, 203, or 204A may be required. Specialized topics in phonetics and phonology. Meets with course 252A. May be repeated for credit. Letter grading.

351B. Topics in Phonetics and Phonology. (2) Seminar, four hours. Enforced requisite: course 200A. Course 201A, 203, or 204A may be required. Specialized topics in phonetics and phonology. May not be applied toward MA degree requirements. Meets with course 251A. May be repeated for maximum of 8 units. S/U grading.

352A. Topics in Syntax and Semantics. (4 Seminar, four hours. Enforced requisite: course 200B. Course 201B, 201C, 214, 215, or 216 may be required. Specialized topics in syntax and semantics. Meets with course 252B. May be repeated for credit. Letter grading.

352B. Topics in Syntax and Semantics. (2 Seminar, four hours. Enforced requisite: course 200B. Course 214, 215, or 216 may be required. Specialized topics in syntax and semantics. Meets with course 252B. May be repeated for credit. Letter grading.

353A. Topics in Language Variation. (4) Seminar, four hours. Enforced requisite: course 110. Course 202 may be required. Specialized topics in language variation. Meets with course 253B. May be repeated for credit. Letter grading.

353B. Topics in Language Variation. (2) Seminar, four hours. Enforced requisite: course 110. Course 202 may be required. Specialized topics in language variation. Meets with course 253A. May be repeated for credit. S/U grading.

420. Practical Phonetics Training. (1) Extensive practice in production, perception, and transcription of sounds from a wide range of languages. Concurrency with required courses of section 140 and 251A.

432. Practicum: Phonetic Data Analysis. (2) Designed for graduate students. Workshop in examination of phonetic data, such as sound spectrograms, oscillographic records, and computer output. May not be applied toward MA or PhD degree requirements. S/U grading.

596A. Directed Studies. (1 to 8 Preparation: completion of all undergraduate deficiency courses. Designed individual study or research. May be applied toward MA course requirements. May be repeated for credit. S/U grading.

596B. Directed Linguistic Analysis. (1 to 8 Preparation: completion of MA degree requirements. Intensive work with native speakers by students individually. May be repeated for credit. S/U grading.

597. Preparation for MA Comprehensive and PhD Qualifying Examinations. (1 to 8 Preparation: at least six graduate linguistics courses. May be taken only in terms in which students expect to take comprehensive or qualifying examinations. May not be applied toward MA course requirements. May be repeated for credit. S/U grading.


599. Research for PhD Dissertation. (1 to 16) Preparation for advancement to PhD candidacy. May not be applied toward PhD course requirements. May be repeated for credit. S/U grading.

Swahili

Lower-Division Courses


Upper-Division Courses


Management

John E. Anderson Graduate School of Management

F407 Mullins Management Commons
Box 951481
Los Angeles, CA 90095-1481
310-825-7982
http://www.anderson.ucla.edu

John W. Mamer, PhD, Chair
Dominique M. Hanssens, PhD (Bud Knapp Marketing Professor Emeritus)
Alfred E. Hoflander, PhD
Sanford M. Jacoby, PhD (Howard Noble Professor Emeritus of Management)
Harold H. Kasarjian, PhD
Archie Kleingartner, PhD
J. Clayburn La Force, Jr., PhD
Barbara S. Lawrence, PhD
Bennet P. Litz, PhD
John J. McDonough, DBA
Bill W. McKeelv, PhD
Bruce L. Miller, PhD
Daniel J.B. Mitchell, PhD (Ho-Su Wu Professor Emeritus of Management)
Frank G. Mittelbach, MA
Donald G. Morrison, PhD (William E. Leonard Professor Emeritus of Management)
William G. Ouchi, PhD (Sanford and Betty Sigioff Professor Emeritus of Corporate Renewal)
William P. Pierskalla, PhD
Richard W. Roll, PhD (Joel Fried Professor Emeritus of Applied Finance)
Hans Schönhammer, DBA
Eduardo S. Schwartz, PhD (California Professor Emeritus of Real Estate and Land Economics)
Carol A. Scott, PhD
John P. Shelton, PhD
E. Burton Swanson, PhD
Walter N. Torous, PhD (Lee and Seymour Graff Endowed Professor Emeritus)
Harold M. Williams, JD
Bruce G. Willis, MBA

Associate Professors
Corinne B. Bendelisky, PhD
Anand V. Bodapati, PhD
Leonardo A. Bursztyn, PhD
Bruce I. Carin, PhD
Felipe Caro, PhD
Judson A. Caskey, PhD
M. Keith Chen, PhD
Sanford E. Devoe, PhD
Paola Giuliano, PhD
Noah J. Goldstein, MA, PhD
Hal E. Hershfield, PhD
Guillaume Y. Roels, PhD
Jenessa R. Shapiro, PhD
Suzanne B. Shu, MEng, MBA, PhD
Miguel M. Unzueta, PhD
Nico Voigtländer, MSc, PhD
Maia J. Young, PhD
Robert Zeithammer, PhD
Shi Zhang, PhD

Assistant Professors
Daniel A. Andrei, PhD
Fernanda Bravo, PhD
Hengchen Dai, PhD
Christian Dippel, MA, PhD
Henry L. Friedman, PhD
Jana Gallus, MS, PhD
Banary P. Hartman-Glaser, PhD
Bernard Herskovic, PhD
Brett W. Hollenbeck, PhD
Sylvia Hristakeva, PhD
Ian L. Larkin, PhD
Elisa F. Long, PhD
William G. Mann, PhD
Beatrice Michaeli, PhD
Velbor V. Milic, PhD
Ricardo N. Perez-Truglia, PhD
Daniel A. Saavedra, PhD
Matthew A. Schmitt, MS, PhD
Steven A. Spiller, BA, PhD
Suhas A. Sriridhan, PhD
Melanie Wasserman, PhD
Jennifer Whitson, PhD

Senior Lecturers
Ariella D. Herman, PhD
David S. Ravetch, MA
Robert S. Spich, PhD
Eric H. Sussman, MBA

Lecturers
Derek J. Alderton, MBA

Julie Ann Gardner-Treloar, MBA
Peter Guber, LLM
Jane Guerin, JD
Paul B. Habibi, MBA
Gordon L. Klein, JD
Danny S. Litt, MBA

Adjunct Professors
John Blevins, MBA
William M. Cockrum, MBA
Joao de Figueredo, PhD
Janis S. Forman, PhD
Robert F. Foster, MBA
Gonzalo Freixes, JD
George T. Geis, PhD
Stephen A. Greene, MBA
Jason C. Hsu, MSc, PhD
Terry D. Kramer, MBA
Robert M. McCann, PhD
Gerald Nickelsburg, PhD
Peter S. Pao, PhD
Subramaniam Ramanarayan, MBA, PhD
David W. Wessells, PhD

Adjunct Associate Professor
Andres Terech, PhD

Adjunct Assistant Professors
Anke M. Audenaert, MA
James J. Kim, MEng, MBA
Ehud Peleg, MBA, PhD

Scope and Objectives
The John E. Anderson Graduate School of Management at UCLA offers a variety of programs leading to graduate degrees at the master's and doctoral levels. These include a professional master's (MBA), a Master of Financial Engineering (MFE), and a Master of Science in Business Analytics (MS), as well as an Executive MBA Program designed for working managers who are moving from specialized areas into general management and a three-year Fully Employed MBA Program designed for emerging managers. The school also offers a Global Executive MBA degree with the National University of Singapore (NUS) Business School that prepares participants for top positions in organizations around the world. A PhD in Management is also offered (an MA degree may be earned in the process of completing PhD requirements), as are a certificate Executive Program and research conferences and seminars for experienced managers.

The school offers an undergraduate minor in Accounting, and an interdisciplinary minor in Entrepreneurship in conjunction with the College of Letters and Science. Several undergraduate courses in management are also offered. Enrollment in these courses, although open to all University students who have completed the requisites, is limited.

Undergraduate Study
Accounting Minor
The Accounting minor provides students with a comprehensive accounting background; admission is competitive and based on overall UCLA grade-point average, grade-point average in preadmission courses, and the grades in Management 1A and 1B. Decisions on admission to the minor are made by the Anderson School Accounting Area. Applications are accepted in fall, winter, and spring quarters. Nontransfer students must apply subsequent
to completing 90 units. Transfer students must apply after completing two academic quarters (excluding summer sessions) at UCLA.

To enter the minor, students must (1) have a minimum cumulative UCLA grade-point average of 2.2, (2) complete all required preadmission courses with a minimum grade-point average of 3.2, and (3) receive grades of B or better in Management 1A and 1B. Repetition of more than one preadmission course or of any preadmission course more than once results in automatic denial of admission to the minor. Satisfying these requirements does not guarantee admission to the program, as only a limited number of students are admitted each year.

**Required Preadmission Courses (31 units minimum):** Economics 1, 2, any statistics course offered or considered transferable to UCLA, Management 1A and 1B (former course 100 taken at UCLA may be substituted), Mathematics 3A or 31A, 3B or 31B or 31E, one Writing II course. If Management 1A and/or 1B are not taken at UCLA, students must complete courses 120A and 122 prior to admission to the minor.

**Required Upper-Division Courses (36 units):** Management 120A, 120B, 122, 127A, and three courses from 107, 108, 109, 123, 124, 126, 127B, 127C, 128, 130A.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Transfer credit for any of the above courses is subject to department approval and is considered only for the preadmission courses. Only one preadmission and one upper-division course repeat is allowed.

Each preadmission and upper-division course must be taken for a letter grade; if taken on a Passed/Not Passed basis, it cannot be applied toward the minor program. Each upper-division course must be completed at UCLA. All courses applied toward minor requirements must receive a grade of C or better. Successful completion of the minor is indicated on the transcript and diploma.

**Entrepreneurship Minor**

See the [Entrepreneurship minor listing](#) for a description of the minor.

**Graduate Study**

Official, specific degree requirements are detailed in *Program Requirements for UCLA Graduate Degrees*, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

**Graduate Degrees**

The John E. Anderson Graduate School of Management offers Master of Science (MS), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Management, the Master of Science (MS) degree in Business Analytics, the Master of Business Administration (MBA) degree, and the Master of Financial Engineering (MFE) degree. The school also offers the Executive MBA Program (EMBA). Fully Employed MBA Program (FEMBA), and Global Executive MBA for Asia Pacific (dual degree program with the National University of Singapore Business School).

Ten concurrent degree programs (Management MBA/Computer Science MS, Management MBA/Dentistry DDS, Management MBA/Latin American Studies MA, Management MBA/Law JD, Management MBA/Library and Information Science MLIS, Management MBA/Medicine MD, Management MBA/Nursing MSN, Management MBA/Health MPH, Management MBA/Public Policy MPP, and Management MBA/Urban Planning MURP) are also offered.

**Management**

**Lower-Division Courses**

1A-1B, Principles of Accounting. (4-4) Lecture; three hours; discussion; one hour. Not open to freshmen. P/NP or letter grading. 1A, Introduction to financial accounting principles, including preparation and analysis of financial statements and financial statements. Valuation and recording of asset-related transactions, including cash, receivables, marketable securities, inventories, and long-lived assets. Current liabilities. 1B, Requisite: course 1A. Completion of balance sheet with emphasis on debt and equity, including in-depth introduction to time value of money concepts. Introduction to partnership and individual income tax accounting.

88. Lower-Division Seminar: Special Topics in Management. (1 to 4) Seminar; three hours; outside study, nine hours. Requisite: satisfaction of Entry-Level Writing requirement. Variable topics seminar that examines specific issues or problems and ways that professionals in management approach study of them. Students define, prepare, and present their own research projects with guidance of professional school faculty member. Letter grading.

**Upper-Division Courses**

107. Business Communications. (4) Process and discipline of effective spoken presentations. Examination and application of classical and contemporary thinking on substance, structure, and delivery of messages. Elements of graphic presentation of data and presentation technology. Students design and deliver informative and persuasive presentations on key management issues. Critique of all efforts; certain efforts to be videotaped for review. P/NP or letter grading.


109. International Business Law. (4) Lecture, three hours. Prerequisite: course 108. Study of international business legal environment, including general overview of international laws and organizations and comprehensive review of U.S. regulations of international business transactions. Special emphasis on international litigation, commercial transactions, regulation of investments, multinational corporations, and international banking. P/NP or letter grading.


121. Ethical Leadership in Accounting. (4) Lecture, seven and one half hours. Not open to freshmen. Review of range of ethical considerations in business decisions involving individuals, corporations, society, and international business. Analysis of cases for presentation and discussion. What is ethical dilemma posed? What is range of possible decisions and band of ethical choices supporting them? Offered in summer only. Letter grading.

122. Management Accounting. (4) Lecture, three hours. Requisites: course 1B, one statistics course. Nature, objectives, and procedures of cost accounting and control; job costing and process costing; accounting for manufacturing overhead; cost budgeting; cost reports; joint-product costing; distribution cost; standard costs; differential cost analysis; profit-volume relationships and break-even analysis. P/NP or letter grading.

123. Auditing. (4) Lecture, three hours. Requisite: course 120B. Comprehensive study of all aspects of procedures used in verification of financial statements and related information, including ethical, legal, and other professional issues. Auditing of a complete set of financial statements. P/NP or letter grading.


125. Special Applications in Accounting. (4) Requisite: course 120B. Recommended: course 122. Designed for seniors. Use of “Strategic Management,” a computer program that simulates experience on a senior management team. Under real and sometimes adverse economic conditions, teams must make strategic and tactical decisions, evaluate performance results, and compete for key resources, market share, and business opportunities. Emphasis on theories of return on equity, product life cycles, product line margin analysis, issuing debt versus equity, and other topics that allow students to simulate principles learned in previous courses. P/NP or letter grading.


127A. Tax Principles and Policy. (4) Lecture, three hours. Requisite: course 1B. Study of fundamental income tax problems encountered by individuals and other entities in analyzing business, investment, employment, and personal decisions. Special emphasis on role of tax rules in capital transactions and decision making. P/NP or letter grading.

127B. Corporate and Partnership Taxation. (4) Lecture, three hours. Requisite: course 1B. Recommended: course 127A. Study of tax issues arising in formation, operation, and termination of corporations and partnerships. Special emphasis on closely held enterprises, including S corporations. P/NP or letter grading.

127C. International Taxation. (4) Lecture, three hours. Recommended prerequisite: course 127A. Study of two principle areas of taxation from a U.S. regulatory perspective: taxation of American citizens and companies conducting business in international arena (outbound transactions) and taxation of
128. Special Topics in Accounting. (4) Lecture, three hours. Requisite: course 120B. Selected topics in public accounting, such as audit and fraud examination, mergers and acquisitions, public-company status and going-public process, role of partner, serving entrepreneurial clients, and fund accounting. Discussion. Offered in fall or spring; study of current interest in accounting profession. Business plan preparation, P/NP or letter grading.

130A. Basic Managerial Finance. (4) Lecture, three hours. Requisites: course 1B, one statistics course. Study of budgeting by business firm with emphasis on applications of economic and accounting principles in financial analysis, planning, and control. Extensive use of problems and cases to illustrate varied analytical techniques employed in decision making. P/NP or letter grading.


132. Financial Planning. (4) Lecture, seven and one half hours. Not open to freshmen. Application of behavioral finance to domestic world. Biases and simplifying rules that are fundamentally in student's real-life decisions, whether they are choosing which wine to buy or deciding whether to get an MBA. Effect of these behavioral influences and consideration of some ways in which they adjust for them, or people spend wisely, invest for future, and generally live happier lives. How behavioral principles can turn profit by developing new financial services and products for consumers. Offered in summer only. Letter grading.

133. Investment Principles and Policies. (4) Lecture, three hours. Requisite: course 130A. Principles underlying investment analysis and policy; salient characteristics of governmental and corporate securities; policies of investment companies and investing institutions; relation of investment policy to money markets and business fluctuations; security pricing-making forces; construction of personal investment programs.

134. Options, Futures, and Derivative Securities. (4) Lecture, seven and one half hours. Not open to freshmen. Introduction to derivative markets. Derivatives are both exchange traded and over-the-counter securities and are the world's largest and most liquid. Focus on organization, role, and evolution of put and call options markets, future and forward markets, and their relations, with emphasis on arbitrage relations, valuation, and hedging with derivatives. Full introduction to evolution of modern derivatives pricing and hedging theory and practice—from basic features of features and options to options valuation pricing model and Black/Scholes formula for stocks, to advanced stock option models, to aspects of measuring volatility, coping with trading costs, and to modifications required to value and hedge interest and foreign currency options. Offered in summer only. Letter grading.


141. Data and Decisions in Business. (4) Lecture, seven and one half hours. Not open to freshmen. Business decisions are made with partial information in uncertain environments. Introduction to data analysis that are appropriate for generating information useful in decision making and to framework for analyzing decisions based on partial information. Development of foundation of probability and statistics necessary for career in auditing. Offered in summer only. Letter grading.

142A. Information Technology in Accounting. (4) Formerly numbered 142.) Lecture, seven and one half hours. Not open to freshmen. Structure and role and use of models and modeling in managerial decision making, with focus on important types of models, their formulation and application, and insight and information that may be gained from use of modeling. Enables managers to understand role of quantitative models in firms that are most often applicable in business planning and decision making. Discussion of applications and case studies in budgeting, investment, and operations, with emphasis on model formulation, interpretation of solutions, and understanding of mathematical versus verbal explanation of situations. Use of solution techniques and computer to solve problems. Offered in summer only, Letter grading.

142B. Communication Technology, Programming, and Accounting. (4) Lecture, six hours. Preparation: intermediate Excel user. Requisite: course 142A (or former 142). Not open to freshmen. Hands-on experience in accounting uses of Microsoft Excel. Topics include creating data tables in financial accounting, using multiple sheets with Excel formulas, preparing professional-quality management reports, constructing graphs to interpret business results, and using Excel functions to evaluate accounting data. Exploration of utility of QuicBooks and functionality for small businesses. Offered in summer only. P/NP or letter grading.

143. Technology and Operations Management. (4) Lecture, seven and one half hours. Not open to freshmen. For students interested in pursuing careers in high technology management, specifically as management consultants in accounting firms. Fundamental strategies and frameworks for analyzing and evaluating various aspects of technology development, implementation, management, and managing new technologies. How to differentiate technology products, market them to tightly focused market segments, and develop effective competitive strategies. Frameworks include technology adoption curve, managing new products, product platform and product line strategy, program management, managing disruptive technology adoption, target market scenarios, managing through strategic dissonance, and competing for intelligence. Studies of high technology cases ranging from semiconductors and online platforms to green vehicles and biotech companies. Offered in summer only. Letter grading.

150. Elements of Industrial Relations. (4) Prerequisites and methods of effectively utilizing human resources in organizations. Relationship between social, economic, and political factors and current problems in industrial relations.

151. Business Leadership. (4) Lecture, seven and one half hours. Not open to freshmen. Designed to enhance student knowledge of and competency in leadership. Conceptual framework grounded in principles of individual, group, and organizational behavior. There is no extant model of leadership that has sufficiently scientifically validated to point of becoming so dominant that it has driven out other models. Different perspectives offered on leadership, with emphasis on development of skills that support effective leadership. Combination of readings, lectures, cases, experiential exercises, and class discussion to allow students to determine their own leadership strengths and limitations, and to develop plans for maintaining/enhancing their strengths and overcoming their limitations. Offered in summer only. Letter grading.

152. Business Strategy. (4) Lecture, seven and one half hours. Not open to freshmen. Fundamentals of business strategy, how to formulate and design to introduce wide variety of modern strategy frameworks and methods, including methods for assessing attractiveness of markets, defining and evaluating strategic positioning of firms and implementation of organization that can deliver on that strategy. Seen from perspective of general managers who have overall responsibility for performance of firms or business units within firms. Development of general management perspective to understand fundamental concepts in leading through organizations and people. Offered in summer only. Letter grading.

153. Human Resources. (4) Lecture, seven and one half hours. Not open to freshmen. Selection and retaining human capital, employment and engagement, base and reward systems, motivating and managing performance, managing employment conflict, national culture impact on HR management, leadership development and succession planning, and organizational change. Offered in summer only. Letter grading.

154. Management of Organizations. (4) Lecture, seven and one half hours. Not open to freshmen. Introduction to strategic and operating issues and decisions. Offered in summer only. Letter grading.

155. Organizational Behavior. (4) Lecture, seven and one half hours. Not open to freshmen. Designed to provide practical guide to managing behavior in organizations, drawing on social sciences to identify key human tendencies that pose obstacles to organizations' effectiveness. Topics include making decisions effectively, motivating others to implement one's vision, managing teams and teams, and influencing those who resist ideas. Exploration of theories using case studies, class discussions, guest speaker, and experiential exercises. How smart people make bad decisions, use and abuse of authority, extrinsic and intrinsic motivation, performance management, group formation, group processes, explicit and implicit prejudice, stereotypes and their consequences, principles of persuasion and negotiations. Offered in summer only. Letter grading.

160. Entrepreneurship and Venture Initiation. (4) Lecture, seven and one half hours; discussion. Introduction to key concepts of entrepreneurship, including: new product development, finance, business plan development, and technology commercialization. Basic tools for entrepreneurs, tools and techniques used by entrepreneurs. Beginning of foundation of probability and statistics for evaluating various alternatives to creating, implementing, and growing one's own firm. Offered in summer only. Letter grading.

161. Business Plan Development. (4) Lecture, three hours. Enforced requisite: course 160. Fundamentals of developing effective business plans, both in presentation and written form. Basic principles of designing and articulating plans for sales, marketing, product or service, operations, financials, management team, and stressing other functional essentials. How to develop well-written investment-quality business plans and business plan presentations, understand various analytical processes required, understand writing and oral presentation skills, and formally present their business plans to audience of angel and venture capitalists. Offered in summer only. Letter grading.

162. Entrepreneurship and Technology Commercialization. (4) Lecture, three hours. Enforced for juniors/seniors. Introduction to transformation of new knowledge and inventions into viable commercial
program and services, with particular emphasis on technology being developed at major research universities like UCLA. Initial emphasis on assessment and protection of intellectual property and early evaluation of technologies to determine potential for commercialization. How intellectual property in its various forms is protected and how rights to these assets are negotiated by parties involved. Examination of nature of contracts and negotiation between university technology transfer offices and venture capitalists, early investors in commercialization space that might lead to patents, licenses, or new business development. Letter grading.

163. Directed Research and New Product Development. (4) Lecture, three hours. Designed for juniors/seniors. Introduction to new product innovation and management. Students assume role of product managers in identifying, developing, and commercializing new products through cases, businesses currently in news, team projects, and readings to develop critical thinking, decision-making skills, and creativity in launching successful new product (team project). Letter grading.


156. Marketing Principles for Entrepreneurs. (4) Lecture, three hours. Study and application of analytic frameworks to assess market opportunities and implement marketing strategies for entrepreneurial firms. Letter grading.

167. Social Entrepreneurship. (4) Lecture, three hours. Designed for juniors/seniors. Examination of fundamental challenges and opportunities of developing and managing a social mission. Use of framework to develop strategic implementation plan that incorporates external analysis, organizational assessment, strategy development, and executive action steps and draws on expertise and experience of faculty members and alumni as well as experts in fields of social entrepreneurship, nonprofit management, and strategic philanthropy who present select topics of interest. Letter grading.

175. Elements of Real Estate and Urban Land Economics. (4) Examination of business decision making as related to logical forces shaping cities and influencing urban land functions and land uses. Emphasis on decision making as it relates to appraisal, building, financing, managing, marketing, and using urban property.

180. Special Topics in Management. (4) Lecture, four hours. Topics of special interest to undergraduate students. Specific subjects may vary each term depending on particular interest of instructors or students. May be repeated for credit. P/NP or letter grading.

182. Leadership Principles and Practice. (4) Lecture, six hours. Proven methods for motivating, and inspiring best performance, persuading, and influencing key people. How to operate effectively with and without authority and innovation; decision-making, and negotiating skills, both one-on-one and in groups. Organizational examples, simulations, and in-class exercises. P/NP or letter grading.

195. Community or Corporate Internships in Management. (2 to 4) Tutorial, to be arranged. Limited to juniors/seniors. Internship in supervised setting in community agency or business. Students meet on regular basis with sponsor and provide reports of their experience. May be repeated for maximum of 8 units. Individual contract with supervising faculty member required. P/NP or letter grading.

199. Directed Research in Management. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation of selected research topic under guidance of faculty member. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

201A. Business Forecasting: Turning Numbers into Knowledge. (4) Discussion, three hours. Preparation: facutlty permission. Examination of one approach to analytical thinking—forming numeric and textual data into carefully formulated alternative models. Data studied include macroeconomic variables (growth, inflation, unemployment, interest rates, and exchange rates), industry data, and firm data. Letter grading.

201B. Econometrics and Business Forecasting. (4) Lecture, five hours. Management of statistical topics in applied econometric modeling. Emphasis on assumptions underlying classical normal linear regression model, special problems in application, and interpretation of results. Practical applications extensively developed in student projects.

202B. Economic Consulting and Applied Managerial Economics. (4) Lecture, three hours. Requisites: courses 402, 405. Use of economic models to analyze issues of property, environmental damage, trademark infringement, brand value, and consumer demand. Focus on economic thinking and problem solving using case studies as basis for lectures and hands-on projects. Letter grading.

203A. Economics of Decision. (4) Discussion, three hours. Preparation: basic probability theory. Basics of single-person decision theory and introduction to noncooperative game theory. Examination in some detail of von Neumann/Morgenstern expected utility theory. Other topics in decision theory include subjective expected utility theory and departures from expected utility theory. S/U or letter grading.


204B. Theory and Application of Regression Analysis. (4) Lecture, three hours. Recommended requisites: course 204A. Designed for PhD students. Introduction to generalization regression analysis. Linear model, maximum likelihood estimation, endogeneity, instrumental variables, differences-in-differences, regression-discontinuity design, propensity score matching, limited dependent variable models, introduction to computational programming. S/U or letter grading.


205A. International Business Economics. (4) Requisites: course 405. International business environment, international economic institutions, national and regional trade policies and developments, trends in foreign markets, and international monetary problems, studied for their influence on organization and operation of the international corporation.

205B. Market Power, Mergers, and Antitrust. (4) Lecture, three hours. Requisites: course 405. Topics in applied industrial organization, including merger policy, differentiated product demand, market power, and Department of Justice and Federal Trade Commission Merger Guidelines. Examination of issues in antitrust based on law and economics, with emphasis on practice and measurement. S/U or letter grading.

209A-209B. Managing Complex Business Deals. (209A: 3 or 4/209B: 1 or 2) Formerly numbered M209A. Lecture, three hours. Preparation: familiarity with basic microeconomics and concepts, including basic principles of accounting, finance, and economics. Course 209A is enforced requisite to 209B. Advanced course in business organization. Examination of structure of business deals, including joint ventures, financial control, risk, and return. Topics include venture capital investments, debt and loan agreements, employment agreements, distribution and marketing agreements (including franchising), joint ventures. Assigned reading and discussion on topics that incorporate terms of business transactions of deals. Concurrency scheduled with Law 239 and S/U grading.

210A. Mathematical Programming. (4) Discussion, three hours. Preparation: linear algebra. Comprehensive development of theory and computational methods for linear programming/fundamental models. Topics to applications to a variety of areas. S/U or letter grading.

210B. Applied Stochastic Processes. (4) Discussion, three hours. Preparation: probability theory at level of Electrical Engineering 131A or Mathematics 116 or Statistics 110A. Introduction to stochastic processes, renewal theory, Markov chains, and Markov decision processes, with emphasis on problem formulation, decision making, and characterization of optimal policies. Special topics include traditional operations research topics (inventory, random processing, maintenance, reliability, as well as several in microeconomics (search and research and development). S/U or letter grading.

210C. Network Flows and Integer Programming. (4) Discussion, three hours. Preparation: linear programming. Survey course to (1) lay foundations for more advanced study of graphs, network flow models, and integer programming models and their applications; (2) establish connections between these theoretical foundations and real problems drawn from many areas of management, and (3) build professional skills needed to apply these tools. S/U or letter grading.

211A. Nonlinear Mathematical Programming. (4) Discussion, three hours. Requisites: course 210A, Mathematics 32A. Treatment of applications of optimization for situations where models must be nonlinear, with special emphasis on case of “convexity.” Topics include classical approaches to optimization, theory of duality and duality, main computational approaches, and survey of currently available computer software. S/U or letter grading.

211B. Large-Scale Mathematical Programming. (4) Discussion, three hours. Requisites: course 210A. Mathematical programming methods, and optimization for situations where models are large and have special structure, as is often the case in real applications. Focus on ways of exploiting special structures with combinatorial, multitudes, and stochastic aspects in pursuit of computational tractability. S/U or letter grading.

212. Behavior under Uncertainty. (4) Lecture, three hours. Designed for candidates for advanced professional training in foundational research and current controversies in behavioral literature on judgment and decision making under uncertainty. S/U or letter grading.

213C. Introduction to Multivariate Analysis. (4) Discussion, three hours. Preparation: linear algebra. Knowledge of differential and integral calculus of several variables, basic probability theory, and univariate mathematical statistics. Introduction to use of multivariate models in management research to organize and represent information; interpretation of coefficients from
multivariate exploratory models (e.g., principal axes and factor analysis models); survey of multivariate statistical procedures (e.g., multiple discriminate analysis, multivariate analysis of variance, canonical correlation, and confirmatory factor models). S/U or letter grading.

214. Managerial Decision Making. (4) Lecture, three hours. Introduction to principles of rational judgment and choice, common behavioral biases of managers and consumers, and corrective tools and procedures, drawing heavily on disciplines of psychology and behavioral economics. Topics include decision structuring, chance processes, forecasting, confidence, likelihood, and risk-taking; model perception and risk-taking; decision under uncertainty, multivariate choice, framing and mental accounting, intertemporal choice, allocation decisions, organizational decision making, choice architecture, happiness, and well-being. S/U or letter grading.

215A. Negotiations Analysis. (4) Lecture, three hours. Series of negotiation exercises to foster development of students' negotiation skills and experience. Use of economic and game-theoretic concepts in a debrief to gain insight and develop framework for finding broad negotiation principles applicable. S/U or letter grading.


217A. Decision Analysis. (4) Lecture, three hours. Requisite: course 402. Managerial decision making occurs in presence of uncertainty which can be about events over which no individual has any control or it can be about what other individuals will do. Framework provided for structuring and analyzing such decisions, with application to such areas as product development, litigation, business of treasure hunting, and bidding. S/U or letter grading.


222. Corporate Decision Making and Incentives. (4) Lecture, three hours. Requisite: course 403. Use of basic microeconomics to answer what information is needed to make good decisions, what incentives are needed to motivate managers, and how information should be recorded to facilitate both. Essential for careers in consulting, private equity, and general management. S/U or letter grading.


224. Business Law for Managers and Entrepreneurs. (4) Lecture, three hours. Introductory course that uses a legal approach to teach students to recognize, understand, and manage legal issues. Topics include contract law, litigation process and alternatives, intellectual property law, business formation, corporate law, employment law, collateralized lending, and bankruptcy reorganizations. How to deal with potential legal issues before they become serious problems. S/U or letter grading.

225. Law and Management of Nonprofit Organizations. (4) Same as Public Policy M229.) Lecture, three hours. Introduction to important legal, financial, and management issues confronting nonprofit organizations. Topics include contract law, intellectual property, taxation, and managing exempt status under IRC Code Section 501(c)(3), corporate governance, political and legislative activity restrictions, and strategic planning, fund raising, non-profit accounting, and employment law. S/U or letter grading.


229A. Special Topics in Accounting. (4) Lecture, three hours. Designed for PhD students. Examination in depth of problems or issues of current concern in accounting, such as application of information economics and managerial-agent model to accounting. S/U or letter grading.


229X-229Y-229Z. Accounting Workshops. (1-1-2) Discussion, two hours. Designed for PhD students. Intended to develop ability to critically evaluate research in accounting and financial reporting. Papers presented in colloquium format by leading scholars in accounting. Active participation and intellectual interchange encouraged through discussion of papers during colloquium. May be repeated for credit. S/U grading.

230. Theory of Finance. (4) Lecture, three hours. Requisite: course 408. Primary focus on valuation of corporate liabilities and other securities under uncertainty. Capital asset pricing model presented rigorously and compared with more recent theories of asset pricing such as arbitrage pricing theory and option pricing model, using empirical evidence. Second focus on analysis of problems in corporate finance such as optimal financing of the corporation and the market for corporate control. S/U or letter grading.

231A. Topics in Corporate Finance. (4) Lecture, three hours. Requisites: courses 230 or 430, 408. Identifying and solving financial problems through use of cases. Application of financial theory and financial techniques to business problems, using written reports and classroom discussion. S/U or letter grading.

231B. Nonprofit Sector Financial Policy. (4) Lecture, three hours. Requisites: courses 408, 430, identifying and solving financial problems for all types of nonprofits. Organization with attention to funds accounting, budgeting and control, investment decision making when market valuation cannot be used as criterion, and sources of funds for nonprofit organizations. Use of cases. S/U or letter grading.

231C. Corporate Valuation. (4) Lecture, three hours. Requisites: courses 408, 430. Lectures, discussions, and presentations. Focus on and application of valuation tools relevant for valuing projects, divisions, and corporations. Topics of discounted cash flow valuation (DCF) and relative valuation using market multiples. Theories and practice to value different projects, including IPOs, mergers and acquisitions, divestitures, and private firms. Exploration of how real options affect investment decisions and how they can be identified and used. S/U or letter grading.

231D. Takeovers, Restructuring, and Corporate Governance. (4) Lecture, three hours. Requisites: courses 230 (or 430), 408. Process by which corporate control transactions take place; role of market for corporate control in leading to economic restructuring and shifts in resource allocation by corporations. Empirical evidence on economic and capital market reactions to control transactions and to defensive measures by management. Focus on interaction of strategic planning, firm value maximization, and investment decisions in life cycle of growth of firm. S/U or letter grading.

231E. Managing Finance and Financing Emerging Enterprises. (4) Lecture, three hours. Requisites: courses 230 (or 430), 403, 408. Designed for second-year graduate students. Emphasis on financial, control, and investment issues confronting rapidly growing new companies in emerging industries. Consideration and selection of financing vehicles that may be appropriate to securing organizations' money requirements. S/U or letter grading.

232. Investment Management. (4) Lecture, three hours. Requisites: courses 230 or 430, 408. Topics include application of portfolio theory to investment decisions, performance evaluation, and basics of portfolio management strategies. S/U or letter grading.


232E. Market and Credit Risk Management. (4) Lecture, three hours. Requisites: courses 408, 430. Discussion of regulatory environment for both market and credit risk management, data necessary to manage these risks, types of models used for risk management, types of securities and techniques for hedging market and credit risk, and risk measurement of risk management systems, and other types of risks that affect risk management, such as operation risk, liquidity risk, commodity risk, weather risk, and model risk. Letter grading.

232F. Behavioral Finance. (4) Lecture, three hours. Requisite: course 408. Introduction to and explanation of evidence of anomalous return behavior found in U.S. equities markets. Presentation of some parametric tests of stock price movements and tests of asset pricing models, in studies from psychology and explanation of trading activity in equity risk-return paradigm. Introduction to some psychological biases that researchers suspect and evidence for investors. Presentation of some results from psychology literature to explain irrationalities encountered in finance literature. Presentation of latest evidence on why individual investors trade and how individual and institutional investors form their portfolios. Letter grading.
239C. Empirical Research in Finance. (4) Lecture, three hours. Preparation: training in econometrics. Primarily designed for PhD students, but well-prepared master's students may find course useful in their career preparation. In-depth study of empirical research in field of finance. Statistical methodologies applied to test market efficiency, and asset pricing theory. S/U or letter grading.

239D. PhD Seminar: Corporate Finance. (4) Seminar, three hours. Designed for PhD students. Advanced topics in corporate finance theory and empirical research. May be repeated for credit with instructor change. S/U or letter grading.

239X-239Y-239Z. Finance Workshops, (1-1-2) Discussion, fifteen hours. Students design projects that are intended to develop ability to critically evaluate finance research. Papers presented in colloquium format by leading scholars in finance. Active participation and intellectual interchange encouraged through discussion of papers in sessions prior to workshop, as well as during colloquium. May be repeated for credit. S/U grading.


240E. Managerial and Organizational Operations. (4) Lecture, three hours. Requisite: course 410. Designed for second-year graduate students. Exploration of operating issues involved in managing entrepreneurial enterprises. Integrative course, building on methodologies, principles, and concepts provided in requisite functional and strategic core courses. Use of extensive readings and case studies to develop skills and philosophies needed for managing managerial and entrepreneurial operations. S/U or letter grading.

240F. Global Supply Chain Management. (4) Lecture, three hours. Requisite: course 410. Business environment today is characterized by globalized operations, intense competition, rapid technological change, and short product life cycles. Consequently, firms can no longer afford to operate in isolation. In many industries competition has moved from firm level to supply chain level. Study provides understanding of strategic, tactical, and operational issues in supply chain management, with generous attention to emerging digital economy. S/U or letter grading.

240G. Global Operations Strategy. (4) Lecture, three hours. Requisite: course 410. This course covers a range of challenges of operating globally in a range of industries, including software, consulting, automotive, and textile. Several opportunities for hands-on qualitative methods, with strategic perspective throughout. S/U or letter grading.

241A. Technology Management. (4) Lecture, three hours. Requisites: courses 410, 411. Management of high-technology firm, including acquisition, creation, and utilization of technology and knowledge assets. Research and product development, product and process technologies, technology regimes, high-technology management and technology strategies. Case examples from sectors such as computing, telecommunications, e-business, medical device, nanotechnology, advanced transportation systems, and space programs. S/U or letter grading.


242A. Models for Operations Planning, Scheduling, and Control. (4) Discussion, three hours. Designed for PhD students with some knowledge of mathematical techniques and stochastic processes. Foundations of operations planning, scheduling, and control, with emphasis on formal models and their applications. Aggregate planning, work force scheduling, inventory management, and detailed operations scheduling and control. S/U or letter grading.

242B. Models for Operations Systems Design. (4) Discussion, three hours. Requisite: course 210C. Design of large-scale research and development projects. Deterministic and stochastic models for design of manufacturing and service systems, including long-range forecasting, operational economics, capacity, location, facilities, processes, technologies, work, and work structures. S/U or letter grading.


245. Special Topics in Decisions, Operations, and Technology Management. (4) Lecture, three hours. Designed for MBA and PhD students. Studies of advanced subjects of current interest in decisions, operations, and technology management. Emphasis on recent developments and application of specialized knowledge. Topics vary each term and have included strategy for information intensive industries, empirical research in operations research, complex IP questions facing technology companies today, and managing copyright in increasingly complex content. S/U or letter grading.

246A. Business and Environment. (4) Lecture, three hours. Overview of many ways in which environmental issues interact with main functional areas of business, finance, marketing, strategy, operations, accounting. Basic understanding of source and structuring of environmental issues, with focus primarily on business aspects. Specific topics vary from year to year, but course details what every manager should know about environmental issues in business. S/U or letter grading.

247. Intellectual Property for Technology Entrepreneurs and Managers. (2) (Same as Electrical Engineering M293.) Seminar, two hours; outside study, four hours. Introduction to intellectual property (IP) in context of technology products and markets. Topics include best practices to put in place before product development starts, how to develop high-value patent portfolios, patent licensing, offensive and defensive IP litigation considerations, trade secrets, opportunities and pitfalls of open source software, trademarks, marketing, and more. Emphasis on content ecosystems, and adopting IP strategies to globalized marketplaces. Includes case studies inspired by complex IP questions facing technology companies today, S/U or letter grading.

249. Comparative Industrial Relations. (4) Same as Public Policy CM221.) Lecture, three hours; outside study, five hours. Requisites: courses 21, 105. Role of collective bargaining in labor management relations. Analysis of union/man management relations, and design of corporate unions. S/U grading.

250. Management of Human Resources. (4) Seminar, two hours; outside study, four hours. Requisites: courses 410, 411. Management of human resources, with generous attention to many industries competition has moved from firm level to supply chain level. Provides understanding of human resource management in information economy, and models for management at personal, company, and international levels, historical and contemporary analytical comparison of political, social, and economic contexts influencing human resource systems of selected developed countries. In addition to discussing possible frameworks for analyzing human resource systems, examination of institutions and ideologies of labor, management, and government, and interaction of their power relationships; substance and manner of determination of “web of rules” governing rights and obligations of the parties; and resolution of conflicts. S/U or letter grading.

254. Incentives and Motivation in Organizations. (4) Lecture, three hours. Course 254 is open to MBA, EMBA, and FEMBA students. Focus on strategic management of human resources by drawing on decision making. Directly motivating consistent with goals and policies of firm. Motivating effects of different forms of monetary and non-monetary incentives in different types of organizations and the role of employees and executives. Analysis of cases and interaction with experts in human resource management and compensation practices to develop skills needed to design and implement optimization reward systems for organizations. S/U or letter grading.

255. Comparative Industrial Relations. (4) Same as Public Policy CM221.) Lecture, three hours; outside study, five hours. Requisites: courses 21, 105. Role of collective bargaining in labor management relations. Analysis of union/man management relations, and design of corporate unions. S/U or letter grading.

256. Leadership and Ethics. (4) Lecture, three hours. Series of real-life situations that pose complex problems of leadership and ethics, so students develop better understanding of how they can successfully address business situations that define their leadership and ethical positions. Letter grading.

257. Human Resource Management in Creative and Nonprofit Sectors. (4) Designed for graduate students. Analysis of human resource management theory and practices in industries where primary product is creative or intellectual (e.g., arts, entertainment, education, high technology, and journalism). Consideration of incorporation of work design, employee influences, systems, and business strategies that define human resource management. Interpersonal and group process for managing human behavior. S/U or letter grading.

258X-258Y-258Z. Research Seminars: Management and Organizational Behavior. (1-1-2) Formerly numbered 258.) Seminar, two hours. Designed for PhD students. Development of ability to critically evaluate research in fields of management and organizational behavior. Active participation and intellectual interchange encouraged through discussion of papers during colloquium. May be repeated for credit. S/U or letter grading.
Limitations of marketing data. Letter grading.

Marketing research, with increased sensitivity to research. Marketing research is aid to management.

Marketing research is a field of micro-level topics related to study of organizational systems and organizational environments. Topics may include demographic variables, social class, and cultural factors such as careers, participation, negotiations, and technology/work systems.

Letter grading.

S/U or letter grading.

Letter grading.

Marketing Strategy and Planning. (4)

Lecture, three hours. Requisite: course 411. Development of framework for strategic marketing planning based on customer behavior, market segmentation, product positioning, life cycle, market responsiveness, and competitive reaction. Within this framework, development of key elements in annual marketing process. Letter grading.

Sales and Channel Management. (4)


Global Marketing Management. (4)

Lecture, three hours. Requisite: course 411. Analysis of opportunities, distinctive characteristics, and emerging trends in foreign markets, including exploration of alternative methods and strategies for entering foreign markets. Conceptual issues of organizational planning and control; impact of national, social, economic, and political differences; and problems of adapting American marketing concepts and methods. Letter grading.

Price Policies. (4)

Lecture, three hours. Requisite: courses 405, 411. Consideration of environment of pricing decision—costs, customer, channels, competition, and regulation. Analysis of when and how to apply pricing policies, including two-part tariffs, quantity discounts, product differentiation, bundling, and auctions. Letter grading.

Consumer Behavior. (4)

Lecture, three hours. Requisite: course 411. Study of nature and determinants of consumer behavior. Emphasis on influence of sociopsychological factors such as personality, small groups, demographic variables, social class, and culture on formation of consumers' attitudes, consumption, and choice. S/U or letter grading.

Market Research. (4)

Lecture, three hours. Requisite: course 411. Designed for prospective users of research results rather than for specialists in research. Marketing research is aid to management decision-making; development of problem-solving skills, providing knowledge of concepts and methods of marketing research, with increased sensitivity to limitations of marketing data. Letter grading.

Data Analytics for Marketing and Finance. (4)

Lecture, three hours. Enforced requisite: course 402. How to fit predictive models and visualize multivariate data using examples and topics from marketing and finance. Topics include conditional prediction, methods for reducing variance, treatment of regression, visualization and graphics, automating analysis for high dimensional data. Use of industry-leading R/Studio statistical environment. S/U or letter grading.

Brand Management. (4)

Lecture, three hours. Requisite: course 411. Introduction to considerations in development, implementation, and management of brands. Discussion of strategies to creating and maintaining strong brands. Topics include brand knowledge and identities, marketing mix and brands, brand architectures, and brand equity. Letter grading.

New Product Development. (4)

Lecture, three hours. Requisite: course 411. Examination of new product development (NPD) process with objective of learning key tools and methods and applying them to case studies, exercises, and course projects. Products viewed through three lenses: quantifiable rational attributes, appeal due to emotional characteristics, and cost/technology/competitive tradeoffs. NPD process also includes projective case phases: ideation, concept generation and selection, detailed design, prototyping and testing, and ramp-up and product launch. Coverage of mass customization, parallel prototyping, cost leadership, and Letter grading.

Advertising and Marketing Communications. (4)

Lecture, three hours. Requisite: course 411. Detailed study of strategies of media and forms of advertising and marketing communications to develop integrated strategies. Review of use and effectiveness of advertising and communication tools. Evaluation of advertising and promotional policies from development through implementation. Letter grading.

Digital One-to-One Marketing. (4)

Lecture, three hours. Requisites: courses 402, 411. Use of notion of customer life cycle as organizing principle and application to digital one-to-one marketing context. Frameworks and analytical tools for interacting with customers and learning about their preferences as they evolve through four stages of customer life cycle: (1) customer acquisition, (2) initial post-promotion purchasing, (3) mid-maturity purchase and transaction behavior, and (4) customer attrition or switchover to other product lines. S/U or letter grading.

Selected Topics in Marketing. (4)

Lecture, three hours. Requisite: course 411. Study of selected areas of marketing knowledge and thought. Specific subjects vary each term depending on particular interests of instructor and students. Individual projects and reports. May be repeated for credit. S/U or letter grading.

Theory in Marketing. (4)

Serves as mechanism to introduce students to development of marketing thought. Issues pertaining to general topic of theory development and testing. Prepares students for conducting theoretically grounded research in marketing.

Research in Marketing Management. (4)

Discussion, three hours. Designed for PhD students. Study of research issues associated with marketing management decisions. Recent research in areas of strategic marketing, market segmentation, new product development and introduction, pricing strategies, channel policy, promotion decisions, and sales force management examined critically. Review of both quantitative and behavioral approaches to studying these issues.

Quantitative Research in Marketing. (4)

Discussion, three hours. Designed for PhD students in management and related fields. Students are assumed to have good background in marketing principles and to have familiarity with statistics, mathematical programming, and econometrics. Review of a range of quantitative models as applied in marketing research. S/U or letter grading.

Behavioral Research in Marketing. (4)

Seminar, three hours. Designed for PhD students who are conducting research in consumer behavior or related areas. Empirical research in consumer behavior surveyed and critically evaluated from theoretical as well as practical perspectives.

Special Research Topics in Marketing. (4)

Designed for PhD students. Advanced selected topics in marketing, with emphasis on thorough examination of one or two topics in current research and theory. May be repeated for credit.

Workshops: Marketing. (1-2-2)

Discussion, three hours. Designed for PhD students. Required of all students during first two years of their PhD Program. Series consists of leading scholars in marketing and related disciplines who make presentations to marketing faculty and PhD students. Active participation and intellectual interchange that helps students gain richer perspective on field of marketing. In Progress (269X, 269Y) and S/U or letter grading.

Web Business. (4)


Entrepreneurial Opportunities in Medical Technology. (4)

Same as Bioengineering M233A.) Lecture, three hours; outside study, nine hours. Designed for graduate and professional students in engineering, dentistry, design, law, management, and medicine. Focus on understanding how to identify unmet clinical needs, properly filter through these needs using various acceptance criteria, and selecting promising needs for which potential medtech solutions are explored. Students work in groups to expeditiously traditional research and development processes to invent and implement new medtech devices that increase quality of clinical care and result in improved patient care in hospital system. Introduction to intellectual property basics and various medtech business models. Letter grading.

Medtech Innovation I: Prototyping and New Venture Development. (4)

Same as Bioengineering M233B.) Lecture, three hours; discussion, three hours; outside study, six hours. Enforced requisite: course M271A. Designed for graduate and professional students in engineering, dentistry, design, law, management, and medicine. Development of medtech solutions for unmet clinical needs previously identified in course M271A, with focus on commercializing viable medtech solutions. Exploration of concept selection, business plan development, intellectual property filing, financing strategies, and device prototyping. Letter grading.

Information Systems Project Management. (4)


Current Topics in Entertainment, Media, and Sports. (2)

Seminar, two hours. Designed for graduate students. Examination in depth of current issues in entertainment, media, and sports. Topics vary. May be repeated for credit. S/U or letter grading.

Special Topics in Information Systems. (4)

Seminar, three hours. Designed primarily for PhD students. Examination in depth of problems or issues of current concern in information systems theory and practice. Topics vary. May be repeated for credit. S/U or letter grading.

Current Research in Information Systems. (1-1-2)

Seminar, two hours. Limited to PhD candidates. Introduction to research in Information Systems Colloquium Series. Regularly scheduled presentations of current research and state-of-
art developments in information systems field. Study and discussion of research presented. May be repeated for credit. S/U grading.


M277. Real Estate Finance Law. (1 to 3) (Same as Law M202A) Lecture, three hours. Concentrated study of law governing financing of land transactions from both national and California perspectives. Topics include California deed of trust, installment land contracts and securitization, assignment of rents, receivership, prepayment, foreclosure, priorities, California antideficiency legislation, impact of borrower bankruptcy on mortgage lenders, construction lending, future advances lending, and secondary market. S/U or letter grading.

277A-277B. Real Estate Finance Law. (277A: 3 or 4) Lecture, three hours. Course 277A is enforced requisite to 277B. Concentrated study of law governing financing of land transactions from both national and California perspectives. Topics include California deed of trust, installment land contracts and other mortgaging sub-institutes, assignments of rents, receiverships, prepayment, foreclosure, priorities, California antideficiency legislation, impact of borrower bankruptcy on mortgage lenders, construction lending, future advances lending, and secondary market. Concurrently scheduled with Law 209. In Progress (277A) and S/U or letter (277B) grading.

278A. Urban Real Estate Financing and Investing. (4) Lecture, three hours. Requisites: courses 408, 430. Investor-oriented course in which real estate and business trends are evaluated to determine alternative real estate investment opportunities. Use of current financial investment theories and techniques to real estate investment opportunities in case studies and short case problems to illustrate development of investment strategies. S/U or letter grading.

279A. Cases in Real Estate Investments. (4) Lecture, three hours. Requisites: courses 408, 430. Development of understanding of principal issues involved with real estate investment and finance. Topics include real estate financing and valuation of variety of contexts (single and multifamily residential, commercial/industrial, shopping center, and hotel properties), real estate taxation, real estate law, development patterns, REITs, and leasing. S/U or letter grading.

279B. Entrepreneurial Real Estate Development. (4) Lecture, three hours. Requisite: course 279A or 279A. 408, 430. Introduction to various aspects of real estate development from perspectives of entrepreneur and investor. Coverage of all types of developments, including single family, multifamily, hotel, office, retail, and industrial. Industry guest speakers to help reinforce principles taught. Real estate development simulation and group presentations to panel of investors included. S/U or letter grading.


280B. Personal and Professional Development. (4) Discussion, three hours. Designed for PhD students. Provides students with opportunities to enhance their own professional values and approaches in process of testing and learning values and standards in applied behavioral sciences and human systems development. S/U or letter grading.

281B. People in Organizations. (4) Designed for graduate students. Introduction to different philosophical perspectives for understanding human behavior. Theories and concepts important for understanding human behavior in organizations, as well as managerial implications of individual, group, and social behavior. Special attention to knowledge about satisfaction, motivation, and productivity in organizations.

282. Optimizing Team Performance. (4) Lecture, three hours. Emphasizes 409, 411A. Optimization of team performance by diagnosing complex team dynamics and taking appropriate action to improve team functioning to help students strengthen their teamwork in ways that are proven to increase effectiveness and performance of teams. Letter grading.

284B. Organization Development. (4) Discussion, three hours. Designed for graduate students. Exploration of effects of organizational practices on individual self-fulfillment and systems effective- ness. Theories of organization change and action/research methods in organization development. Theory merged with practice through seminar discussion of field observations. S/U or letter grading.

284C. Managing Entrepreneurial Organizations. (4) Lecture, three hours. Issues involved in developing and managing entrepreneurial organizations. Topics include organizational growth, management tools, strategic planning, organizational design, management development, control systems, leadership, and cultural management. Examination of transitions that individuals must make as organizations grow. S/U or letter grading.

285A. Leadership, Motivation, and Power. (4) Discussion, three hours. Designed for graduate students. Theories of motivation and to theorizing and motivating people. Relative effectiveness of various leadership styles, different motivation theories, and power tactics from managerial point of view. Use of experience-based learning methods to aid diagnosis and understanding of one’s own influence styles. S/U or letter grading.

285B. Managerial Interpersonal Communication. (4) Discussion, three hours. Designed for graduate students. Interpersonal communication, personal factors affecting managerial communications. Styles and modes of communication in one-to-one, group, and large-systems settings. Opportunities offered to deepen understanding of one’s own communication styles and skills, considering verbal, nonverbal, perceptive, and cross-cultural aspects. S/U or letter grading.

286. Negotiations Behavior. (4) Discussion, three hours. Presentation of theoretical principles and concepts from psychology, sociology, and economics through lectures and readings, with focus primarily on improving practical negotiating skills through experiential learning (i.e., role playing). Participants learn not only to enhance their individual abilities in dyadic and group situations, but also to analyze contexts for most effective application of these skills. S/U or letter grading.

287. Groups and Their Facilitation. (4) Discussion, three hours. Development of cognitive and experiential understanding of dynamics of small group training and its facilitation, including “sensitvity”/basic groups, group counseling, self-help groups, small groups, and committees in managerial decision making. Analysis of relevant theory, research findings, and case studies. Letter grading.

288A. Selected Topics in Behavioral Science. (4) Discussion, three hours. Designed for graduate students. Theories of human behavior fundamental to study of individual, group, organizational, and cultural behavior. Exploration in depth of selected theoretic positions, extending and consolidating behavioral science knowledge and application. May be repeated for credit. S/U or letter grading.


291. Strategies for Technology-Based Corporate Development. (4) Lecture, three hours. Enforced requisite: course 420. Focus on key aspects of corporate business development transactions, including strategic deal selection, mergers and acquisitions deal integration, deal structuring (including and tax issues), and economic analysis of transactions. Examination of technology and digital media markets. Letter grading.

M292A. Research and Development Policy. (4) (Same as Public Policy M280A) Lecture, three hours. Examination of research and development as process and as element of goal-oriented organization. Factors affecting invention and innovation; transfer of technology; organizational and behavioral considerations; coupling of science, technology, and organizational goals; assessing of and forecasting technological futures. S/U or letter grading.

M292B. Growth, Science, and Technology. (4) (Same as Public Policy M280B) Lecture, three hours. Economic growth and change. Role of advances in science and technology, and organizing innovators and factors impinging on their behavior. How technological breakthroughs (or discontinuities) can form new industries or transform nature of and position of firms in existing industries. S/U or letter grading.


M293B. Ethical Considerations in Business. (4) Lecture, three hours. Examination of a range of ethical considerations in business decisions involving the individual, corporation, society, and international business. Analysis of cases for classroom presentation and discussion.

294. Law and Economics Workshop. (2 or 3) Seminar, two hours. Requisite: course 405 or Economics 201A. Knowledge of empirical methods and basic calculus required. Interdisciplinary seminar series bringing together outside speakers with scholars and students from UCLA Law School and academic departments. Topics include contracts, torts, intellectual property, and new business enterprises. S/U or letter grading.


295B. Small Business Management. (4) Exploration of crucial aspects in managing small business enterprises. Emphasis on identification and analysis of characteristic operating problems of small firms and application of appropriate methods or techniques for their solution.

295C. Corporate Entrepreneurship. (4) Inquiry into nature of entrepreneurship and effective implementation of entrepreneurial strategies in large industrial enterprises. Emphasis primarily on managerial effects aimed at identification, development, and exploitation of technical and organizational innovations, management of new product or process developments, and effectiveness of new venture management in a corporate context.

295D. Business Plan Development. (4) Lecture, three hours. Enforced requisite: course 295A. Fundamentals of developing effective written business plans. Basic principles of developing plans for sales,
marketing, product or service, operations, financials, and management and staffing functions of new startup businesses. S/U or letter grading.

296A. International Business Management. (4) Discussion, three hours. Identification, analysis, and resolution of managerial issues of policy and action within the context of multinational corporate with emphasis on problems of adaptation to different sociocultural, legal, political, and economic environmental characteristics on planning, structuring of organizations, administration, and coordination and control in multinational firms. S/U or letter grading.


297C. International Business Law. (4) Requisites: courses 205A, 296A. Legal environments in which international business operates; overseas business relationships, arbitration of foreign market disputes; expropriation of foreign investments; international business and government relations.

297D. International Business Negotiations. (4) Requisite: course 296A. Exploration of international business negotiations of multinational enterprises with governmental agencies and foreign-based firms on a wide range of issues, such as establishment/disjoint of joint ventures, extent of foreign ownership/management control, terms/conditions for technology transfer, investment incentives.

297E. Business and Economics in Emerging Markets. (4) Lecture, three hours. Requisite: course 205A or 405. Analysis of changing economic, political, demographic, and sociocultural conditions in developing countries as they affect the business environment. Process of economic growth, market-oriented reforms, and creation of domestic capital markets. Inflation and stabilization programs, identification of business risks and opportunities, as well as tools needed to manage firms under these conditions. S/U or letter grading.

298A. Special Topics in Management Theory. (4) Discussion, three hours. Emphasis on recent contributions to theory, research, and methodology. Of special interest to advanced PhD candidates, academic staff, or distinguished visiting faculty. May be repeated for credit.

298D. Special Topics in Management. (4) Lecture, three hours. Designed for graduate students. In-depth examination of problems or issues of current concern in management, with numerous topics offered each year. May be repeated for credit. Letter grading.

298F. Special Topics in Management. (2) Lecture, one hour. Designed for graduate students. In-depth examination of problems or issues of current concern in management, with numerous topics offered each year. May be repeated for credit. Letter grading.

298H. Special Topics in Management. (2) Lecture, nine months. Designed for graduate students. In-depth examination of problems or issues of current concern in management, with numerous topics offered each year. May be repeated for credit. S/U grading.

298I. Special Topics in Management. (1) Lecture, one hour. Designed for graduate students. In-depth examination of problems or issues of current concern in management, with numerous topics offered each year. May be repeated for credit. S/U grading.

299X-299Y. Management Strategy and Policy Workshops. (1 to 3) Lecture, three hours. Designed for PhD students. Intended to develop ability to critically evaluate research in fields relevant to study of management strategy and policy. Papers presented for formative and summative evaluation. Letter grading.


299R. Research Methods in Management. (4) Discussion, three hours. Designed for PhD students. Provides feedback to papers prepared for research requirement. Quarterly meetings to discuss expectations of research committee and Doctoral Office. Students must enroll the term in which they are submitting their research paper. May be repeated for credit. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

400. Mathematical Foundations of Management. (4) Lecture, three hours. Limited to graduate students. General mathematics review for MBA students. Fundamental mathematics, including topics from algebra, differential calculus in single and multiple variables, logarithmic and exponential functions, probability, and statistics; applications, including economic theory, finance, time value of money, inventory management, linear programming, and mathematical models. S/U grading.

401A-401B. Managerial Problem Solving. (3-3) Discussion, three hours. Use of international business simulation and series of complex multifaceted cases to explore core theories and decision-making principles and decision analysis related to effective utilization of analytical methods for making strategic business decisions. In Progress Requirement. Quarterly meetings to discuss uses of analytical methods for making strategic business decisions. Letter grading.

402. Data and Decisions. (4) Lecture, three hours. Topics include probabilities, random variables (expectation, variance, covariance, normal random variables), decision trees, estimation, hypothesis testing, and multiple regression models. Emphasis on actual business problems and data. Letter grading.

403. Financial Accounting. (4) Lecture, three hours. Designed for graduate students. Introduction to fundamental financial accounting methods and procedures, with emphasis on financial statements. Provides basis for firm understanding of "language of business"—accounting. Letter grading.


Provides skills to enable students to assess critically how developments in world economy affect particular industry environments. Letter grading.


408. Foundations of Finance. (4) Lecture, three hours. Introduction to managerial finance. Topics include time value of money, cash flow analysis, capital budgeting, construction of optimal portfolios, capital budgeting, and weighted average cost of capital. Letter grading.


410. Operations Technology Management. (4) Lecture, three hours. Requisites: courses 402, 403. Principles and decision analysis related to effective utilization of factors of production in manufacturing and nonmanufacturing activities for both intermittent and continuous systems. Production organizations, analytical models and methods, facilities design, and design of control systems for production operations. Letter grading.


412. Management of Organizations. (4) Lecture, three hours. Preparation: completion of first-year core program. Integrative approach to theory and practice of management in complex organizations, emphasizing managerial roles in designing organizational structures, creating/maintaining planning, control, information, incentive systems, different patterns of decision making such structures and systems tend to produce.

413A. Managerial Computing. (4) Lecture, three hours. Individual computing in support of strategic analysis, decision making, and management communication. Use of personal computers, such as Excel and VBA, and network resources for data access. Emphasis on hands-on exercises. S/U or letter grading.

414A. Leadership Foundations. (2) Three-day residential format. Managing and working with people, with emphasis on motivation and development of individuals, leadership and interpersonal relationships, and group dynamics in complex organizational settings. S/U grading.

414B. Introduction to Business Field Studies. (2) Three-day residential format. Enforced requisite: course 414A. Continuation of course 414A, with emphasis on motivation and development of individuals and groups and on social processes in complex organizations, S/U or letter grading.


421B. Communication Development for Leaders. (Formerly numbered 421.) Lecture, three hours. Course 421A is requisite to 421B. Focus on communication basics and techniques. Students develop and present findings on needs—entrepreneurial, interpersonal communications, or public speaking. Students learn skills required to be-
come successful presenter; how to present differing types of materials, apply communication theory and strategy to organize informative and persuasive content, and effectively deliver presentations to varied audiences; how to apply visual and verbal messaging theory while engaging an audience to organize, prioritize, and target messages for maximum persuasive impact, and communicate these messages in persuasive manner. In Progress grading (credit to be given only on completion of course 421B).

421B. Communication Development for Leaders II. (2) Lecture, three hours. Requisite: course 421A. Focus on providing tools and skills that allow students to express their vision, inspiring and gaining commitment from stakeholders, and impressing interviewers and investors. Course materials are grounded in empirical research. Skills and techniques learned are broadly generalizable. Experiential exercises to enhance students’ abilities in oral and written communications. Study builds on managerial communication skills from Communication Development for Leaders (course 421A). S/U or letter grading.

422. Analysis and Communications. (4) Discussion, three hours. Designed for graduate students. Study and practice of oral and written management communications, including audience analysis, persuasion, written and oral presentations, technical information, and uses of computer technology. Organized around writing and speaking exercises. Personal attention to students’ written communications and oral presentations.

424. Strategic Business Presenting. (2) Lecture, 90 minutes. Improvement of strategic business presenting skills such as presentation delivery techniques, visual and verbal persuasion principles, building arguments, crafting evidence, art of business storytelling, and other related topics, with focus on individual student presentations. Letter grading.


427. Global Access Program. (8) Fieldwork, 60 hours. Requisites: courses 402, 403, 405, 408, 409, 410, 411, 414A, 420. Limited to Fully Employed MBA Program students. Must be taken in Summer and Fall Quarters of third year. Faculty-guided consulting project with international company or U.S. company with international operations. Establishment of client relationships, identification of problems or strategic questions, design of study, collection and analysis of data, development and reporting of implementation recommendations. Exposure to local business practices, visiting companies, and exploration of local cultural and historical sites. S/U or letter grading.

444A-444C. Applied Management Research: Two-Quarter Plan. (4-4) Fieldwork, four hours. Limited to fully employed MBA students. Must be taken after completion of first year in program. Projects include: (1) faculty-guided consulting project with private companies, nonprofit organizations, or government agencies; (2) school-based research focused on identification of problems or strategic questions, design of study, collection and analysis of secondary and primary research data, development of comprehensive business plan, and rapid identification of findings and recommendations; or (2) faculty-guided implementation of one new business or (3) pursuit of one faculty-led special research project worthy of publication in recognized academic research journal. In Progress (444B) and S/U or letter (444C) grading.

445. Applied Management Research. (8) Fieldwork, eight hours. Must be taken in second year (or its equivalent for part-time students). Supervised study of an organization, including establishment of client/consultant relationships, identification of problems or strategic questions, design of study, collection and analysis of data, development and reporting of implementation recommendations. Letter grading.

451. Fieldwork in Organizational Development. (2 to 12) Fieldwork, to be arranged. Requisite: course 284B. Supervised practical fieldwork in organizational development consultation in interpersonal, group, intergroup, or organizational settings. S/U or letter grading.

454. Fieldwork in Organizations. (4) Fieldwork, to be arranged. Preparation: completion of at least two terms of MBA program. Required of all full-time MBA students. Under direction of MBA program senior associate dean or other supervising faculty adviser, students perform supervised practical experience or internship in organizations, on campus or off. Development of predetermined assignment(s) pursuant to defined program of study that includes reporting and assessment of fieldwork experience through combination of written or oral presentations and may include preparation of evaluations or consulting report correlating to defined program of study. S/U grading.

455E. International Exchange Program. (2 to 16) Lecture, 30 hours; discussion, 10 hours. Students attend five lectures at UCLA before and/or after trip. Courses are typically offered as a fully employed MBA Program. Taught in English. Intensive one-week program in one foreign country. Courses taught by faculty members from partner institutions in destination country. Attendances at presentations by government officials and business executives in destination country. Exposure to business practices and culture in destination country through site visits, study of economy and political environment by comparing and contrasting it with U.S., and important historical and cultural aspects of destination country. May be repeated once for credit. Letter grading.

459E. International Exchange. (2 to 4) Lecture, three hours; discussion and site visits, 20 hours. Preparation: completion of first-year core courses in Fully Employed MBA Program. Taught in English. Intensive one-week program in one foreign country. Courses taught by faculty members from partner institutions in destination country. Topics vary but are taught in English, curriculum is in full. Exposure to local business practices, visiting companies, and exploration of local cultural and historical sites. S/U or letter grading.

460A-460B. Managing Finance and Financing Emerging Enterprises. (2-2) Lecture, three hours. Conceptual analysis is enforced for second-year graduate students. Emphasis on financial, control, and investment issues confronting rapidly growing companies in entrepreneurial settings. Consideration and selection of financing vehicles that may be appropriate to securing money requirements of organizations. In Progress (460A) and Letter (460B) grading.

461A. Leadership Foundations I. (2) Lecture, two hours. Limited to Executive MBA Program students. Focus on individual problem-solving and decision-making skills. Alternative conceptual frameworks presented for augmenting diagnostic and decision-making skills of individuals. Use of readings, cases, decision simulations, and discussions to explore areas of charting job and career progress, working with others, and shaping work culture. S/U or letter grading.

461B. Leadership Foundations II. (1) Lecture, one hour. Limited to Executive MBA Program students. Continuation of course 461A, with focus on developing assessment and development tools. Fa- miliarization and use of programmatic self-evaluation, self-assessment and development tools. Readings, cases, simulations, peer coaching, and discussions. In Progress grading (credit to be given only on completion of course 461C).

461C. Leadership Foundations III. (1) Lecture, one hour. Limited to Executive MBA Program students. Continuation of course 461B. Further exploration of leadership strengths and weaknesses, with emphasis on individual peer coaching, conflict management, informal social networks, and interpersonal and cultural aspects. Readings, cases, simulations, peer coaching, and discussions. S/U or letter grading.

461D. Leadership Foundations IV. (1) Lecture, one hour. Limited to Executive MBA Program students. Continuation of course 461C. Further exploration of leadership strengths and weaknesses, with emphasis on individual peer coaching, conflict management, informal social networks, and interpersonal and cultural aspects. Readings, cases, simulations, peer coaching, and discussions. S/U or letter grading.

461E. Leadership Foundations V. (1) Lecture, one hour. Limited to Executive MBA Program students. Continuation of course 461D. Further exploration of leadership strengths and weaknesses, with emphasis on individual leadership and organizational change. Readings, cases, simulations, peer coaching, and discussions. S/U grading.

463. Data Analysis and Management Decisions Under Uncertainty. (4) Lecture, four hours. Limited to Executive MBA Program students. Survey of statistical model building, with emphasis on managerial interpretation of data. Classical statistics covered through multiple regression to support courses in finance and marketing that follow. Fundamental approaches to decision making under uncertainty.

464. Managerial Accounting. (4) Limited to Executive MBA Program students. Familiarizes the manager with functions of accounting by focusing on use of external financial reports for evaluating corporate performance and use of accounting information for internal planning and control.

465A. Quantitative Methods for Managers. (2) Lecture, two hours. Limited to Executive MBA Program students. Survey of modeling approaches to managerial planning and decisions. Emphasis on ability to recognize situations where models can be used advantageously, to work effectively with model building specialists, and to make good use of models once they have been developed. S/U or letter grading.

465B. Game Theory. (2) Lecture, two hours. Limited to Executive MBA Program students. Conceptual framework for thinking strategically about business decisions. Examination of interactions between firm and parties external to it through lens of game theory. Framework based on ideas underlying game theory, such as recognizing interdependencies among players, getting away from win-lose mindset, importance of added value of players, anticipating other players’ reactions to one’s own actions. S/U or letter grading.

466A. Financial Policy for Managers. (4) Lecture, four hours. Limited to Executive MBA Program students. Modern financial management deals with decision making under uncertainty for corporate financial management, portfolio investment decisions, financial institutions, and international financial management. Focus on learning sound theoretical tools and applying them in casework. S/U or letter grading.

466B. Advanced Financial Policy for Managers. (4) Lecture, four hours. Limited to Executive MBA Program students. Advanced financial management frameworks with decision making under uncertainty for corporate financial management, portfolio investment decisions, financial institutions, and international financial management. Focus on learning sound theoretical tools and applying them in casework. S/U or letter grading.

467. Real-World Challenges Leaders Face. (4) Lecture, three hours. Limited to Executive MBA students. Examination of range of ethical considerations in business decisions involving individuals, corporations, society, and international businesses. Analysis of cases for classroom presentation and discussion. Letter grading.

468. Macroeconomics and Economic Forecasting. (4) Lecture, four hours. Limited to Executive MBA Program students. Macroeconomic theory and its application to business forecasting. Major economic indicators and their historical description of the U.S. economy; theoretical tools that business economists use to analyze impacts of monetary and fiscal policy; macroeconomic techniques applicable to business decisions.

469. Organizational Behavior. (4) Formerly numbered 469A. Lecture, three hours. Limited to Executive MBA Program students. Introduction to organizational behavior for executives, including but not limited to roles, teaming, fostering motivation, and other topics on psychology of leadership. Lecture, discussion, and experiential applications of course concepts. S/U or letter grading.

470A. Introduction to Strategic Management Research. (2) Fieldwork, two hours. Limited to Executive MBA Program students. Methods of organizational and strategic analysis to determine relationship of organization with its environment. In Progress grading (course can only be taken in combination with courses 470B and 470C).

470B. Strategic Management Research. (4) Fieldwork, four hours. Limited to Executive MBA Program students. Preparation of strategic overview of selected company entailing collection and analysis of primary and secondary data, including (but not limited to) interviews of corporate executives, corporate financial and marketing data, industry reports, and customer and competitor interviews and/or surveys. In Progress grading (credit to be given only on completion of course 470C).

470C. Strategic Management Research. (4) Fieldwork, four hours. Limited to Executive MBA Program students. Further research and analysis of one strategic issue facing selected company and identified in course 470B. Presentation of final reports and evaluation of student efforts by corporate personnel. S/U or letter grading.

470D. Seminar: Policy Analysis. (2) Seminar, two hours. Limited to Executive MBA Program students. Site visit to selected company, presentation of final reports, and analysis of current efforts by corporate personnel. S/U or letter grading.

471A-471B. Management Practicum. (2-2) Lecture, three hours. Two-termed individual or group (three to five students) project on global strategic issues designed to allow students to employ and enhance concepts learned in classroom. In Progress (471A) and letter (471B) grading.

472A. Marketing Strategy and Policy. (4) Lecture, four hours. Limited to Executive MBA Program students. Strategic marketing decisions, including development of marketing objectives and strategies and implementation of these strategies through pricing, channel, promotion, and new product decisions. S/U or letter grading.

472B. Customer Information Strategy. (4) Lecture, four hours. Limited to Executive MBA Program students. Exploration of innovation and marketing of products and services to customers. Use of creativity tools, customer research, and marketing science to create value and allocate resources so as to maximize revenues and profits that result. S/U or letter grading.

473A. Managerial and Organizational Processes. (2) Lecture, four weeks for 13 weeks. Limited to Executive MBA Program students. Macroanalytic issues, including intergroup relations, design and functioning of organizations, and relationships of organizations to their environment. S/U or letter grading.

474. Operations and Technology Management: Systems, Strategies, and Policies. (4) Lecture, three hours. Limited to Executive MBA Program students. Analysis of strategic and operating policies and decisions for systems that produce goods and services. Examination of role of comprehensive planning, inventory, scheduling of resources, distribution systems, and system location. Comprehensive problems.


476. Competitive Strategy and Business Policy. (4) Limited to Executive MBA Program students. Study of general management task of forging a corporate competitive strategy. Emphasis on economics of business rivalry within a variety of industrial settings and implications of changing environments on business strategy.

477. The Manager and Business/Society Relationships. (4) Limited to Executive MBA Program students. While organizations may, to some extent, choose their immediate environments, there are broad environmental factors and trends that affect management. Emphasis on emerging trends in key areas of government regulation, labor relations, international trade, basic economic structure, and social responsibility.

478. Selected Topics in Management. (2 to 4) Seminar, three to four hours. Limited to Executive MBA Program students. Examination of selected problems and issues in an area of current concern in management. S/U or letter grading.

479E. International Exchange: Executive MBA Program. (2 to 4) Lecture, three hours; discussion and site visits, 20 hours. Preparation: completion of first-year core courses in Executive MBA Program. Intensive one-week program in one foreign country, with courses taught by faculty members from partner institutions in destination country. Topics vary but are tailored to MBA curriculum, including but not limited to finance, marketing, global economics, strategy, human resources, operations, and technology management. Exposure to local business practices, company site visits, and exploration of local cultural and historical sites. S/U or letter grading.

480. Corporate Governance. (4) Lecture, three hours. Foundations for members of corporate boards of directors to understand their responsibilities, hone their skills, and learn to improve their practices. Topics include legal and moral duties as directors, risk management, managing top management team of corporation. Letter grading.

481A-481B. Negotiations Behavior. (2-2) Lecture, three hours. Limited to Global Executive MBA students. Presentation of theoretical principles and concepts from psychology, sociology, and economics through lectures and readings, with focus primarily on improving practical negotiating skills through experiential learning (i.e., negotiations simulations). Participants learn to enhance their individual abilities in dyadic and group situations and to analyze contexts for most effective application of these skills. In Progress (481A) and letter (481B) grading.

482. Negotiations Behavior. (4) Lecture, three hours. Presentation of theoretical principles and concepts from psychology, sociology, and economics through lectures and readings, with focus primarily on improving practical negotiating skills through experiential learning (i.e., negotiations simulations). Participants learn to enhance their individual abilities in dyadic and group situations and to analyze contexts for most effective application of these skills. Letter grading.

483. Management of Technology and Innovation. (4) Lecture, three hours. Problems of managing technological innovation in Asia. Topics include incorporation of technological consideration into strategy, adoption of technological innovation, promoting innovation through organizational design and leadership, e-business, and m-business. Letter grading.

484A-484B. Management of Technology and Innovation. (2-2) Lecture, three hours. Course 484A is enforced requisite to 484B. Limited to Global Executive MBA students. Problems of managing technological innovation in Asia. Topics include incorporation of technological consideration into strategy, adoption of technological innovation, and promotion of technological innovation through organizational design and leadership, e-business, and m-business. In Progress (484A) and letter (484B) grading.

485. Corporate Entrepreneurship. (4) Lecture, three hours. Managerial effectiveness, innovation, development, and exploitation of technical and organizational innovations, management of new product or process developments, and effective new venture management in context of new manufacturing and service industries. Development of awareness and understanding of range, scope, and complexity of issues related to creation of organizational environment that is supportive of entrepre-
neural endeavors, and insight concerning effective implementation of technological and organizational innovations in corporate setting. Letter grading.

486. Strategic Leadership and Strategic Implementation. (4) Lecture, three hours. Designed to address several fundamental aspects of leading complex organizations, with emphasis on important tasks of developing well-aligned, high-performance organizations and on challenges of leading change in organizations. Enables students to develop organized point of view on strategic leadership and to increase their awareness of themselves as leaders. Letter grading.

487A-487B. Entrepreneurship and Venture Initiation I, II. (4) Lecture, 90 minutes. Course 487A is enforced requisite to 487B. Limited to Global Executive MBA Program students. Introduction to basic tools and jargon required for entrepreneurship that requires financing or management of intellectual property. Terminology used by lawyers, accountants, venture capitalists, and other investors when forming and financing new companies. Assessment of feasibility of business concept and communication of concept to potential investors, employees, and business partners. In Progress (487A) and letter (487B) grading.


489. Entrepreneurship and Venture Initiation. (4) Lecture, 90 minutes. Limited to Executive MBA Program students. Introduction to basic tools and jargon required for entrepreneurship that requires financing or management of intellectual property. Terminology used by lawyers, accountants, venture capitalists and other investors when forming and financing new companies. Assessment of feasibility of business concept and communication of concept to potential investors, employees, and business partners. S/U or letter grading.

501. Cooperative Program. (2 to 8) Preparation: consent of UCLA AGSM graduate adviser and assistant dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Research in Management. (1 to 8) Directed individual study or research. May be repeated. S/U or letter grading.

597. Preparation for Qualifying Examinations, (4 or 12) Preparation for master’s comprehensive examination or PhD qualifying examinations. S/U grading.


Professors
Russel E. Caffissi, PhD
Gregory P. Carman, PhD
Jane P. Chang, PhD (William Frederick Seyer Professor of Materials Electrochemistry)
Yong Chen, PhD
Bruce S. Dunn, PhD (Nippon Sheet Glass Company Professor of Materials Science)
Nasr M. Ghoniem, PhD
Mark S. Goorsky, PhD
Vijay Gupta, PhD
Robert F. Hicks, PhD
Yu Huang, PhD
Subramanian S. Iyer, PhD
Ioanna Kakkouli, PhD
Richard B. Kaner, PhD
Xiaochun Li, PhD
Ali Mosleh, PhD (Evelyn Knight Professor of Engineering)
Qibing Pei, PhD
Dwight C. Streit, PhD
Sarah H. Tolbert, PhD
Kang L. Wang, PhD (Raytheon Company Professor of Electrical Engineering)
Paul S. Weiss, PhD
Benjamin M. Wu, DDS, PhD
Ya-Hong Xie, PhD
Jenn-Ming Yang, PhD
Yang Yang, PhD (Carol and Lawrence E. Tannas, Jr., Endowed Professor of Engineering)

Professors Emeriti
Alan J. Ardell, PhD
David L. Douglass, PhD
John D. Mackenzie, PhD (Nippon Sheet Glass Company Professor Emeritus of Materials Science)
Kanji Ono, PhD
Aly H. Shabaik, PhD
King-Ning Tu, PhD

Associate Professors
Suneel Kodambaka, PhD
Jaime Marian, PhD
Gaurav Sant, PhD

Assistant Professor
Ximin He, PhD

Adjunct Associate Professors
Eric P. Bescher, PhD
Esther H. Lan, PhD
Sergey Prikhodko, PhD

Scope and Objectives
At the heart of materials science and engineering is the understanding and control of the microstructure of solids. Microstructure is used broadly in reference to electronic and atomic structure of solids—and defects within them—at size scales ranging from atomic bond lengths to airplane wings. The structure of solids over this wide range dictates their structural, electrical, biological, and chemical properties. The phenomenological and mechanistic relationships between microstructure and the macroscopic properties of solids are, in essence, what materials science is all about.

Materials engineering builds on the foundation of materials science and is concerned with the design, fabrication, and optimal selection of engineering materials that must simultaneously fulfill dimensional, property, quality control, and economic requirements.

The undergraduate program in the Department of Materials Science and Engineering leads to the BS degree in Materials Engineering. Students are introduced to the basic principles of metallurgy and ceramic and polymer science as part of the Materials Engineering major. A joint major field, Chemistry/Materials Science, is offered to students enrolled in the Department of Chemistry and Biochemistry (College of Letters and Science).

The department also has a program in electronic materials that provides a broad-based background in materials science, with opportunity to specialize in the study of those materials used for electronic and optoelectronic applications. The program incorporates several courses in electrical engineering in addition to those in the materials science curriculum.

The graduate program allows for specialization in one of the following fields: ceramics and ceramic processing, electronic and optical materials, and structural materials.

Undergraduate Study
The materials engineering program is accredited by the Engineering Accreditation Commission of ABET.

The Materials Engineering major is a designated capstone major. Students undertake two individual projects involving materials selection, treatment, and serviceability. Successful completion requires working knowledge of physical properties of materials and strategies and methodologies of using materials properties in the materials selection process. Students learn and work independently and practice leadership and teamwork in and across disciplines. They are also expected to communicate effectively in oral, graphic, and written forms.

Materials Engineering BS Capstone Major
The materials engineering program is designed for students who wish to pursue a professional career in the materials field and desire a broad understanding of the relationship between microstructure and properties of materials. Metals, ceramics, and polymers, as well as the design, fabrication, and testing of metallic and other materials such as oxides, glasses, and fiber-reinforced composites, are included in the course contents.

Materials Engineering Option
Preparation for the Major
Required: Chemistry and Biochemistry 20A, 20B, 20L; Civil and Environmental Engineering M20 or Computer Science 31 or Mechanical and Aerospace Engineering M20; Materials Science and Engineering 10, 90L; Mathematics 31A, 31B, 32A, 32B, 33A, 33B (or Mechanical and Aerospace Engineering 82); Physics 1A, 1B, 1C.

The Major
Required: Civil and Environmental Engineering 101 (or Mechanical and Aerospace Engineering 101), 108, Electrical Engineering 100, Materials Science and Engineering 104, 110, 110L, 120, 130, 131L, 132, 143A, 150, 160; one upper-division mathematics course selected from Civil and Environmental Engineering 103, Electrical Engineering 102, Mathematics 132, Mechanical and Aerospace Engi-
neering 182B, 182C; two laboratory courses (4 units) from Materials Science and Engineering 121L, 141L, 143L, 161L, or up to 2 units of 199; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; one capstone design course (Materials Science and Engineering 140); and two major field elective courses (12 units) from Chemical Engineering 110, 110L, 120 (or Mechanical Engineering 2), 121, 121L, 122, 130, 131L, 132, Mechanical and Aerospace Engineering 101; one upper-division mathematics course selected from Civil and Environmental Engineering 103, Electrical Engineering 102, Mathematics 132, Mechanical and Aerospace Engineering 182B, 182C; either Materials Science and Engineering 150 or 160 and one course (4 units) from Electrical Engineering 123A, 123B, Materials Science and Engineering 150, 160; 4 laboratory units from Materials Science and Engineering 141L, 141L, or up to 2 units of 199; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; one capstone design course (Materials Science and Engineering 140); and one major field elective course (4 units) from Electrical Engineering 110, 131A, Materials Science and Engineering 111, 143A, or 162.

For information on University and general education requirements, see the College and Schools chapter earlier in this catalog.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Materials Science and Engineering offers Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Materials Science and Engineering.

Materials Science and Engineering

Lower-Division Courses

10. Freshman Seminar: New Materials. (1) Seminar, one hour; outside study, two hours. Preparation: high school chemistry and physics. Not open to students with credit for course 104. Introduction to basic concepts of materials science and new materials vital to advanced technology. Microstructural analysis and various material properties discussed in conjunction with such applications as biomedical sensors, pollution control, and microelectronics. Letter grading.

90L. Physical Measurement in Materials Engineering. (2) Laboratory, four hours; outside study, two hours. Various physical measurement methods used in materials science and engineering. Mechanical, thermal, electrical, magnetic, and optical techniques. Letter grading.

Upper-Division Courses

104. Science of Engineering Materials. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisites: Chemistry 20A, 20B, 20L, Physics 1A, 1B. General introduction to different types of materials used in engineering designs: metals, ceramics, plastics, and composites, relationship between structure (crystals and microstructure) and properties of technological materials. Illustration of their fundamental differences and their applications in engineering. Letter grading.

M105. Principles of Nanoscience and Nanotechnology. (4) (Same as Engineering M101.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 104. Modern methods of materials characterization; fundamentals of crystallography, properties of X rays, X-ray scattering; powder method, Laue method; determination of crystal structures; phase diagram determination; high-resolution X-ray diffraction methods; X-ray spectroscopy; design of materials characterization procedures. Letter grading.

C111. Principles of Materials Characterization A (Crystal Structure, Nanostructures, and X-Ray Scattering). (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 104. Modern methods of materials characterization; fundamentals of crystallography, properties of X rays, X-ray scattering; powder method, Laue method; determination of crystal structures; phase diagram determination; high-resolution X-ray diffraction methods; X-ray spectroscopy; design of materials characterization procedures. Letter grading.

110L. Introduction to Materials Characterization A Laboratory. (2) Laboratory, four hours; outside study, two hours. Requisite: course 104. Experimental techniques and analysis of materials through X-ray scattering techniques; powder method, crystal structure determination; X-ray diffraction methods, and special projects. Letter grading.

111. Introduction to Materials Characterization B (Electron Microscopy). (4) (Formerly numbered C111.) Lecture, three hours; laboratory, two hours; outside study, two hours. Requisites: courses 104, 110. Characterization of microstructure and microchemistry of materials; transmission electron microscopy; reciprocal lattice, electron diffraction, stereographic projection, direct observation of defects in crystals, replication, scanning electron microscopy: emissive and reflective modes; chemical analysis; electron optics of both instruments. Letter grading.


120. Physics of Materials. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 104, 110 (or Chemistry 113A). Introduction to electrical, optical, and magnetic properties of solids. Free electron model, introduction to band theory and Schrödinger wave equation. Crystal bonding and lattice vibrations. Mechanisms and characterization of electrical conductivity, optical absorption, magnetic behavior, dielectrical properties, and p-n junctions. Letter grading.

121L. Materials Science of Semiconductor Devices. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Structure and properties of elementary and compound semiconductors. Electrical and optical properties, defect chemistry, and doping. Electronic materials analysis and characterization, including electrical, optical, and ion-beam techniques. Heterostructures, band-gap engineering, development of new materials for optoelectronic applications. Letter grading.

121L. Materials Science of Semiconductor Devices Laboratory. (2) Lecture, 30 minutes; discussion, 30 minutes; laboratory, two hours; outside study, three hours. Corequisite: course 121. Experiments conducted on materials characterization, including measurements of contact resistance, dielectric constant, and thin film biaxial modulus and CTE. Letter grading.

122. Principles of Electronic Materials Processing. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 104, and Chemical Engineering 20A or Mechanical Engineering 105A. Summary of thermodynamic laws, equilibrium criteria, solution thermodynamics, mass action law, binary and ternary phase diagrams, glass transitions. Letter grading.

130. Phase Relations in Solids. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 104, and Chemical Engineering 20A. Survey of chemical and physical properties of solids. Phase transitions. Letter grading.

131. Diffusion and Diffusion-Controlled Reactions. (4) Lecture, four hours; outside study, eight hours. Requisite: course 130. Diffusion in metals and ionic solids, nucleation and growth theory; precipitation from solid solution, eutectoid decomposition, design of heat treatment processes of alloys, growth of intermediate phases, gas-solid reactions, design of oxidation-resistant alloys, recrystallization, and grain growth. Letter grading.

131L. Diffusion and Diffusion-Controlled Reactions Laboratory. (2) Laboratory, two hours; outside study, four hours. Enforced corequisite: course 131. Design of heat-treating cycles and performing experiments to study interdiffusion, growth of intermediate phases, recrystallization, and grain growth in metals. Analysis of data. Comparison of results with theory. Letter grading.


141L. Computer Methods and Instrumentation in Materials Science. (2) Laboratory, four hours. Preparation: knowledge of BASIC or C or assembly language. Lecture, four hours; discussion, one hour; outside study, four hours. Limited to junior/senior Materials Science and Engineering majors. Interface and control techniques, real-time data acquisition and processing, computer-aided testing. Letter grading.

143A. Mechanical Behavior of Materials. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 104, Mechanical and Aerospace Engineering 101. Plastic flow of metals under simple and combined loading, strain rate and temperature effects, dislocations, fracture, microstructural effects, mechanical and thermal treatment of steels for engineering applications. Letter grading.

143C. Mechanical Behavior Laboratory. (2) Laboratory, four hours. Requisites: courses 90L, 143A may be taken concurrently. Emphasis on mechanical behavior of various materials; elastic and plastic deformation, fracture toughness, fatigue, and creep. Letter grading.

150. Introduction to Polymers. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Polymerization mechanisms, molecular weight and distribution, chemical structure and bonding, structure-property-morphology relationships, and their effects on physical properties. Glassy polymers, springy polymers, elastomers, adhesives. Fiber forming polymers, polymer processing technology, plasticating. Letter grading.


160. Introduction to Ceramics and Glasses. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 104, 130. Introduction to inorganic glasses and ceramics being used as important refractories, coatings, electrical insulators, and unique properties. Examples of design and control of properties for certain applications in engineering. Letter grading.

161. Processing of Ceramics and Glasses. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 160. Study of processes used in fabrication of ceramics and glasses for structural applications, optics, and electronics. Processing operations, including modern techniques of powder synthesis, greenware forming, sintering, glass melting. Microstructure properties relations in ceramics. Fracture analysis and design with an emphasis on ceramics. Letter grading.


162. Electronic Ceramics. (4) Lecture, four hours; outside study, eight hours. Requisites: course 104, Physics 1C. Utilization of ceramics in microelectronics; thin film, dielectric, capacitors, and substrates; design and processing of electronic ceramics and packaging; magnetic ceramics; ferroelectric ceramics and electro-optic devices; optical waveguide applications and design. Letter grading.

170. Engaging Elements of Communication: Oral Communication. (2) Lecture, one hour; discussion, one hour; outside study, four hours. Comprehensive oral presentation and communication skills provided by building on strengths of individual personal styles in context of various speaking situations. Skill set prepares students for different types of academic and professional presentations for wide range of audiences. Learning environment is highly supportive and interactive as students creatively develop and greatly expand effectiveness of their communication and presentation skills. Letter grading.

171. Engaging Elements of Communication: Writing. (2) Lecture, one hour; discussion, one hour; outside study, four hours. Comprehensive technical writing skills on subjects specific to field of materials science and engineering. Students write review term paper in selected subject field of materials science and engineering from given set of journal publications. Instruction leads students through several crucial steps, including brainstorming, choosing topic, composing outline, composing writing of abstract, conclusion, and final polishing. Other subjects include writing style, word choices, and grammar. Letter grading.

180. Introduction to Biomaterials. (4) (Same as Bioengineering C144A) Lecture, four hours; discussion, two hours; outside study, seven hours. Requisites: course 104, or Chemistry 20A, 20B, and 20L. Lecture, four hours; discussion, two hours; outside study, seven hours. Preparation: two years of high school chemistry and mathematics. Topics include relationships between material properties, suitability to task, surface chemistry, processing and treatment methods, and biocompatibility. Concurrently scheduled with course CM280. Letter grading.

188. Special Courses in Materials Science and Engineering. (4) Seminar, four hours; outside study, eight hours. Special topics in materials science and engineering for undergraduate students taught on an experimental or temporary basis, such as those taught by resident and visiting faculty members. May be repeated once for credit with topic or instructor change. Letter grading.

194. Research Group Seminars: Materials Science and Engineering. (4) Seminar, four hours; outside study, eight hours. Designed for undergraduate students who are part of research group. Discussion of research methods and current literature in the field of research of faculty members or students. May be repeated for credit. Letter grading.

199. Directed Research in Materials Science and Engineering. (2 to 10) Tutorial, to be arranged. Emphasis is on experiences in research and investigation under guidance of faculty mentor. Culminating paper or project required. Additional field trips may be arranged and students may be awarded a credit with school approval. Individual contract required; enrollment petition available in Office of Academic and Student Affairs. Letter grading.

Graduate Courses


210. Diffraction Methods in Science of Materials. (4) Lecture, four hours; recitation, one hour; outside study, seven hours. Requisite: course 110. Theory of diffraction of waves (X-ray and electrons) in crystalline and noncrystalline materials. Long- and short-range order in crystals, structural effects of plastic deformation, solid-state transformations, radiographic techniques, direct observation of defects in crystals, replicas; scanning electron microscopy: emissive and reflective modes; chemical analysis; electron optics of both instruments. Letter grading.

211. Introduction to Materials Characterization B (Electron Microscopy). (4) (Formerly numbered C211L) Lecture, three hours; laboratory, two hours; outside study, seven hours. Requisites: courses 104, 110. Characterization of microstructure and microchemistry of materials; transmission electron microscopy; reciprocal lattice, electron diffraction, stereographic projection, direct observation of defects in crystals, replicas; scanning electron microscopy: emissive and reflective modes; chemical analysis; electron optics of both instruments. Letter grading.


213. Cultural Materials Science I: Analytical Imaging and Documentation in Conservation of Materials. (4) (Same as Conservation M215.) Lecture, two hours; laboratory, two hours. Basic and advanced techniques on digital photography, computer-aided recording tools, and scientific imaging to determine and document condition (defects) and technological features of archaeological and ethnographic materials. Development of basic theoretical knowledge on imaging and photonics technology and practical skills on conservation photo-documentation, analytical (forensic) photography, and advanced new imaging technologies. Letter grading.


214. Structure, Properties, and Deterioration of Materials: Rock Art, Wall Paintings, Mosaics. (2) (Same as Conservation M264.) Lecture, three hours. Recommended preparation: basic knowledge of general chemistry and materials science. Introduction to materials and techniques of rock art, wall paintings (including painted surfaces on cement and composite decorative architectural surfaces), and mosaics. Archaeological and ethnographic context of materials, pigments, and binding media. Chemical, optical, and structural properties. Relationship between composition (chemistry), structure of the material, and materials. Principles (chemistry, structure), and properties explained using basic concepts from physics and chemistry. Intrinsic attributes

M216. Science of Conservation Materials and Methods I. (4) (Same as Conservation M216.) Lecture, two hours; laboratory, two hours. Recommended requisite: laboratory safety fundamental concepts course by Office of Environment, Health, and Safety. Introduction to physical, chemical, and mechanical properties of conservation materials (employed for preservation of archaeological and cultural heritage). Characteristics of these materials, application methods of traditional organic and inorganic systems and introduction of novel technology based on biomimetic processes and nanostructured materials and alteration products; development of conservation treatment proposals, testing of conservation products, and methods for conveying future grading.

221. Science of Electronic Materials. (4) Lecture, four hours; outside study, eight hours. Requisite: course 120. Study of major physical and chemical principles affecting properties and performance of semiconductor materials. Topics include bonding, transport, gate stacks, strained Si FETs, SOI and three-dimensional FETs, source/drain engineering including tunnel-enhanced diffusion, nonvolatile memory, and merging processing. Letter grading.

243A. Fracture of Structural Materials. (4) Lecture, four hours; laboratory, two hours; outside study, four hours. Requisite: course 143A. Engineering and scientific aspects of crack nucleation, slow crack growth, and unstable fracture. Fracture mechanisms, dislocation models, fatigue, fracture in reactive environments, alloy development, fracture-safe design. Letter grading.

243D. Dislocations and Strengthening Mechanisms in Solids. (4) Lecture, four hours; outside study, eight hours. Requisite: course 143A. Elastic and plastic behavior of crystals, geometry, mechanics, and interaction of dislocations, mechanisms of yielding, work hardening, and other strengthening. Letter grading.

246A. Mechanical Properties of Nonmetallic Crystalline Solids. (4) Lecture, four hours; outside study, eight hours. Requisite: course 160. Mechanical properties and environmental factors affecting mechanical properties of nonmetallic crystalline solids, including atomic bonding and structure, atomic-scale defects, microstructural features, temperature, stress state, strain rate, size and surface conditions. Letter grading.


247. Nanostructured Materials: Challenges and Opportunities. (4) Lecture, four hours; discussion, eight hours. Limited to graduate students. Literature studies of current and future directions of this rapidly growing field using examples from modern scientific literature. Letter grading.


Discussion of current research and literature in research specialty of faculty members teaching course. May be repeated for credit. S/U grading.

M297B. Material Processing in Manufacturing. (4) (Same as Mechanical and Aerospace Engineering M297B.) Lecture, four hours; outside study, eight hours. Enforced requisite: Mechanical and Aerospace Engineering 183A. Thermodynamics, principles of material processing: phase equilibria and transitions, transport mechanisms of heat and mass, nucleation and growth of microstructure. Applications in casting/ solidification, welding, consolidation, chemical vapor deposition, infiltration, composites. Letter grading.

M297C. Composites Manufacturing. (4) (Same as Mechanical and Aerospace Engineering M297C.) Lecture, four hours; outside study, eight hours. Requisites: course 151, Mechanical and Aerospace Engineering 166C. Matrix materials, fibers, fiber preforms, elements of processing, autoclave/compression molding, filament winding, pultrusion, resin transfer molding, automation, material removal and assembly, metal and ceramic matrix composites, quality assurance. Letter grading.

298. Seminar: Engineering. (2 to 4) Seminar, to be arranged. Limited to graduate materials science and engineering students. Seminars may be organized in advanced technical fields. If appropriate, field trips may be arranged. May be repeated with topic change. Letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

596. Directed Individual or Tutorial Studies. (2 to 8) Tutorial, to be arranged. Limited to graduate materials science and engineering students. Seminars may be organized in advanced technical fields. If appropriate, field trips may be arranged. May be repeated with topic change. Letter grading.

597A. Preparation for MS Comprehensive Examination. (2 to 12) Tutorial, to be arranged. Limited to graduate materials science and engineering students. Reading and preparation for MS comprehensive examination. S/U grading.

597B. Preparation for PhD Preliminary Examinations. (2 to 16) Tutorial, to be arranged. Limited to graduate materials science and engineering students. S/U grading.

597C. Preparation for PhD Oral Qualifying Examination. (2 to 16) Tutorial, to be arranged. Limited to graduate materials science and engineering students. Preparation for oral qualifying examination, including preliminary research on dissertation. S/U grading.


599. Research for and Preparation of PhD Dissertation. (2 to 16) Tutorial, to be arranged. Limited to graduate materials science and engineering students. Usually taken after students have been advanced to candidacy. S/U grading.

Mathematics
College of Letters and Science
6363 Mathematical Sciences
Box 951555
Los Angeles, CA 90095-1555
310-825-4701
http://www.math.ucla.edu

Mikhail Khitrik, PhD, Graduate Vice Chair
Christopher R. Anderson, PhD, Director, Program in Computing
Andrea L. Bertozzi, PhD, Director, Applied Mathematics
Richard S. Elman, PhD, Administrative Vice Chair

Professors
Christopher R. Anderson, PhD
Matthias J. Aschenbreiner, PhD
Paul Balmer, PhD
Andrea L. Bertozzi, PhD (Betsy Wood Knapp Professor of Innovation and Creativity)
Marek Biskup, PhD
Don M. Blasius, PhD
Mario Bork, PhD (David Saxon Presidential Term Professor of Mathematics)
Robert F. Brown, PhD
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Lincoln Chayes, PhD
Tom Chou, PhD
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Christian Haesemeyer, PhD
Haruzo Hida, PhD
Michael A. Hill, PhD
Ko Honda, PhD
Chandrashekhar Khare, PhD
Mikhail Khitrin, PhD
Rowan B. Kipp, PhD
Iwonn C. Kim, PhD
Ker-Chau Li, PhD
Kefeng Liu, PhD
Ciprian Manolescu, PhD
Alexander S. Merkurjev, PhD
Deanna Needell, PhD
Itay Neeman, PhD
William I. Newman, PhD
Stanley J. Osher, PhD
Rafael Ostrovsky, PhD
Igor Pak, PhD
Peter Petersen, PhD
Sorin T. Popa, PhD
Mason A. Porter, PhD
Raphael A. Rouquier, PhD
Romyar T. Sharifi, PhD
Dimitri Y. Shlyakhtenko, PhD
Terence C. Tao, PhD (James and Carol Collins Professor in College of Letters and Science)
Joseph M. Teran, PhD
Burt Totaro, PhD
Lieven Vandenberghe, PhD
Luminita A. Vese, PhD
Monica Visan, PhD
Wotao Yin, PhD
William R. Zame, PhD

Professors Emeriti
Donald G. Babbitt, PhD
Kirby A. Baker, PhD
Lenhart Carleson, PhD
Tony F. Chan, PhD
Shiu-Yuen Cheng, PhD
Philip C. Curtis, Jr., PhD
Rodolfo de la Siajo, PhD
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Gregory I. Eskin, PhD
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Thomas S. Ferguson, PhD
Theodore W. Gamelin, PhD
Mark L. Green, PhD
Nathanail Grossman, PhD
Alfred W. Hales, PhD
Robert I. Jennrich, PhD
Paul B. Johnson, PhD
Alan J. Laub, PhD
Thomas M. Liggett, PhD
Donald A. Martin, PhD
Ronald J. Miech, PhD

Yiannis N. Moschovakis, PhD
Sidney C. Port, PhD
James V. Ralston, Jr., PhD
Paul H. Roberts, PhD, DSc
Bruce L. Rothschild, PhD
Murray M. Schacher, PhD
Roberto H. Schonmann, PhD
Masamichi Takesaki, PhD
V.S. Varadarajan, PhD
James H. White, PhD
N. Donald Ylvisaker, PhD

Associate Professors
Tim Austin, PhD
Lara Dolecek, PhD
Gang Liu, PhD
Andrew S. Marks, PhD
Marcus L. Roper, PhD
Sucharit Sarkar, PhD
Jun Yin, PhD

Assistant Professors
Artem Chernikov, PhD
Alyson K. Fletcher, PhD
Georg Menz, PhD

Lecturer PSOE
William J. Conley, PhD

Adjunct Associate Professor
Christian Ratsch, PhD

Adjunct Assistant Professors
Mary P. Greene, MS
Loong F. Kong, MS

Scope and Objectives
Gauss has called mathematics the “queen of the sciences.” It has provided powerful intellectual tools that have made possible tremendous advances in modern science and technology. The Department of Mathematics offers courses of study that introduce students to the fundamentals of mathematics and allow them to master the most important parts of the subject, both pure and applied. It leads doctoral students to the frontiers of mathematical research, where they can begin to push back those frontiers.

Undergraduate Study
Preliminary Examination in Mathematics
If students wish to enroll in Mathematics 1, 3A, or 31A, they must pass the Mathematics Diagnostic Test.

For specific information about the online test, refer to the Schedule of Classes or the department website, or contact the Mathematics Student Services Office, 6356 Mathematical Sciences.

Advanced Placement in Calculus
Students who have taken the Advanced Placement (AP) Calculus AB Test and obtained a score of 5 receive 4 units of credit and Mathematics 31A equivalency; those with a score of 4 receive 4 units of calculus and analytic geometry credit. They may petition for 31A equivalency, or they may take course 31A at UCLA, although they must still satisfy the course requisites (Mathematics Diagnostic Test). Students who take the BC Test and obtain a score of 5 receive 8 units of credit and Mathematics 31A, 31B equivalency; those with a score of 4 receive 4 units of credit and Mathematics 31A
particular to the repetition of courses (e.g., if they already have credit. This applies in Mathematics 3B or 31B or 32A, they must do so before completing course 32B; if students wish to repeat Mathematics 31B, they must do so before completing course 33A).

For lower-division mathematics courses, students may not take or repeat a course for credit if it is a requisite for a more advanced lower-division course for which they already have credit. This applies in particular to the repetition of courses (e.g., if students wish to repeat Mathematics 31B, they must do so before completing course 32B; if students wish to repeat Mathematics 3B or 31B or 32A, they must do so before completing course 33A).

For upper-division mathematics courses, students may not take or repeat a lower sequence course for credit if it is part of a sequence for which they already have credit. This applies in particular to the repetition of courses (e.g., if students wish to repeat Mathematics 31A, they must do so before completing course 31B or 31BH).

Students may not receive credit for both a course and the honors version of that course (e.g., they may not receive credit for both Mathematics 131A and 131AH).

Mathematics Upper-Division Courses
Mathematics 115A, 131A, 132, 142, 151A, and 164 are offered each term. The remaining upper-division courses are usually offered once or twice each year. The tentative class schedule for the forthcoming academic year is posted in the Student Services Office in February.

Program in Computing Courses
Program in Computing 1 is designed for students who wish to have a broad, general introduction to the topic of computers and computation, but who have no prior experience in computing.

Courses 10A, 10B, and 10C provide an extensive introduction to programming, using the C++ language. Courses 15, 16, 20A, 20B, 20C, 30, 40A, 40B, and 60 are of interest to science and Science majors who are completing a specialization in Computing or who are planning to take upper-division coursework in computer science. These students should seek the advice of their major department.

Undergraduate Majors
The department offers six majors: Mathematics, Applied Mathematics, Financial Actuarial Mathematics, Mathematics of Computation, Mathematics/Applied Science, and Mathematics for Teaching. The department also participates in the Mathematics/Economics Interdepartmental Program, which offers a Mathematics/Economics major, and in the Mathematics/Atmospheric and Oceanic Sciences Interdepartmental Program, which offers a Mathematics/Atmospheric and Oceanic Sciences major.

The Mathematics major is designed for students whose basic interest is in mathematics; the Applied Mathematics major for those interested in the classical relationship between mathematics, the physical sciences, and engineering; the Financial Actuarial Mathematics major for students interested in working in the actuarial field or the application of mathematics, finance, and statistics; the Mathematics of Computation major for individuals interested in the mathematical theory and the applications of computing; the Mathematics/Applied Science major for those with substantial interest in the applications of mathematics to a particular outside field of interest; and the Mathematics for Teaching major for students planning to teach mathematics at the high school level. As part of the Mathematics/Applied Science major, the department offers programs for students interested in the fields of mathematics/history of science and medical and life sciences.

Each course taken to fulfill any of the requirements for any of the mathematics majors must be taken for a letter grade. The Mathematics for Teaching major is a designation that culminates in a model lesson presentation, paper, and portfolio. Through their capstone work, students demonstrate their familiarity with research and current issues in mathematics education, as well as their capacity to problem solve; reason quantitatively, geometrically, and algebraically; construct viable arguments; critique others’ reasoning; and use tools strategically.

Mathematics BS
Mathematics Premajor
Students entering UCLA directly from high school or first-term transfer students who want to declare the Mathematics premajor at the time they apply for admission are automatically admitted to the premajor.

Current UCLA students need to file a petition with the Undergraduate Advising Office in 6356 Mathematical Sciences. All students are identified as Mathematics premajors until they satisfy the following minimum requirements for the major: (1) achieve grades of C or better in all premajor mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B), (2) achieve a minimum 2.5 grade-point average in the calculus sequence with no more than two repeats, and (3) file a petition to declare the major before completing 160 quarter units.

Preparation for the Major
Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Physics 1A, Program in Computing 10A, and two courses from Chemistry and Biochemistry 20A, 20B, Economics 11, Life Sciences 1, Philosophy 31, 132, Physics 1B, 1C, 6B, 6C. Each course must be taken for a letter grade. The mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B) are calculated separately from the other preparation for the major courses and must be completed with a minimum overall 2.5 grade-point average and a grade of C or better in each course. The other preparation courses must be completed with a minimum overall 2.0 grade-point average and a grade of C– or better in each course.

Repetition of more than two mathematics sequenced courses or of any mathematics sequenced course more than once results in automatic dismissal from the major.

Freshman Students
Students must petition to declare the Mathematics major and can do so once they complete all of the mathematics sequenced courses and submit an application to enter the major before completing 160 quarter units. Admission into the major is based on student academic performance on the minimum requirements.

Transfer Students
Transfer applicants to the Mathematics major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of calculus for majors, one calculus-based physics (mechanics) course, one C++ programming course, and two courses from general chemistry for majors, economics, symbolic logic, and calculus-based physics.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

After satisfying the preparation for the major requirements, students need to petition to enter the major at the Undergraduate Advising Office.

The Major
Required: Mathematics 10A, 110B, 115A, 120A, 131A, 131B, 132, and at least five elective courses from 106 through 199 and Statistics 100A through 102C. Each course must be taken for a letter grade. The 12 courses must be completed with a minimum overall grade-point average of 2.0, with grades of C– or better in Mathematics 115A and 131A.
It is strongly recommended that students take Mathematics 115A as one of their first upper-division courses for the major.

**Applied Mathematics BS**

**Applied Mathematics Premajor**

Students entering UCLA directly from high school or first-term transfer students who want to declare the Applied Mathematics premajor at the time they apply for admission are automatically admitted to the premajor.

Current UCLA students need to file a petition with the Undergraduate Advising Office in 6356 Mathematical Sciences. All students are identified as Applied Mathematics premajors until they satisfy the following minimum requirements for the major: (1) achieve grades of C or better in all premajor mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B), (2) achieve a minimum 2.5 grade-point average in the calculus sequence with no more than two repeats, and (3) file a petition to declare the major before completing 160 quarter units.

**Preparation for the Major**

*Required:* Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Physics 1A, 1B, Program in Computing 10A, and one course from Chemistry and Biochemistry 20A, 20B, Physics 1C. Each course must be taken for a letter grade. The mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B) are calculated separately from the other preparation for the major courses and must be completed with a minimum overall 2.5 grade-point average and a grade of C or better in each course. The other preparation courses must be completed with a minimum overall 2.0 grade-point average and a grade of C– or better in each course.

Repetition of more than two mathematics sequenced courses or of any mathematics sequenced course more than once results in automatic dismissal from the major.

**Freshman Students**

Students must petition to declare the Applied Mathematics major and can do so once they complete all of the mathematics sequenced courses and submit an application to enter the major at the Undergraduate Advising Office.

**The Major**

*Required:* Mathematics 115A, 131A, either 131B or 132, 142; two two-term sequences from two of the following categories: numerical analysis—courses 151A and 151B, probability and statistics—courses 170A and 170B, or Statistics 100A and 100B, differential equations—courses 134 and 135; four courses from 106 through 199 and Statistics 100A through 102C (appropriate courses from other departments may be substituted for some of the additional courses provided departmental consent is given before such courses are taken). Each course must be taken for a letter grade. The 12 courses must be completed with a minimum overall grade-point average of 2.6, with grades of C– or better in Mathematics 115A and 131A.

It is strongly recommended that students take Mathematics 115A as one of their first upper-division courses for the major.

**Financial Actuarial Mathematics BS**

**Financial Actuarial Mathematics Premajor**

Students entering UCLA directly from high school or first-term transfer students who want to declare the Financial Actuarial Mathematics premajor at the time they apply for admission are automatically admitted to the premajor.

Current UCLA students need to file a petition with the Undergraduate Advising Office in 6356 Mathematical Sciences. All students are identified as Financial Actuarial Mathematics premajors until they satisfy the following minimum requirements for the major: (1) achieve grades of C or better in all premajor mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Program in Computing 10A) with a minimum 2.5 grade-point average and no more than two repeats, (2) achieve grades of C or better in all premajor economics courses (Economics 1, 2, 11, Management 1A, 1B) with a minimum 2.5 grade-point average and no more than one repeat, and (3) file a petition to declare the major before completing 160 quarter units.

**Preparation for the Major**

*Required:* Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Economics 1, 2, 11, Management 1A, 1B, Program in Computing 10A. Each course must be taken for a letter grade. Transfer credit is subject to department approval; consult with an undergraduate counselor before enrolling in any courses for the major.

To graduate, the eight Mathematics Department courses must be completed with an overall grade-point average of 2.0, with grades of C– or better in Mathematics 115A and 131A, as must the three courses from the Economics Department.

It is strongly recommended that students take Mathematics 115A as one of their first upper-division courses for the major.

**Mathematics of Computation BS**

**Mathematics of Computation Premajor**

Students entering UCLA directly from high school or first-term transfer students who want to declare the Mathematics of Computation premajor at the time they apply for admission are automatically admitted to the premajor.

Current UCLA students need to file a petition with the Undergraduate Advising Office in 6356 Mathematical Sciences. All students are identified as Mathematics of Computation
premajors until they satisfy the following minimum requirements for the major: (1) achieve grades of C or better in all premajor mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B), (2) achieve a minimum 2.5 grade-point average in the calculus sequence with no more than two repeats, and (3) file a petition to declare the major before completing 160 quarter units.

**Preparation for the Major**

**Required:** Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61, Physics 1A, 1B, Program in Computing 10A, 10B, 10C, and one course from Chemistry and Biochemistry 20A, 20B, Physics 1C. Each course must be taken for a letter grade. The mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B) are calculated separately from the other preparation for the major courses and must be completed with a minimum overall 2.5 grade-point average and a grade of C or better in each course. The other preparation courses must be completed with a minimum overall 2.0 grade-point average and a grade of C– or better in each course.

Repetition of more than two mathematics sequenced courses or of any mathematics sequenced course more than once results in automatic dismissal from the major.

**Freshman Students**

Students must petition to declare the Mathematics of Computation major and can do so once they complete all of the mathematics sequenced courses and submit an application to enter the major before completing 160 quarter units. Admission into the major is based on student academic performance on the minimum requirements.

**Transfer Students**

Transfer applicants to the Mathematics/Applied Science major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of calculus for majors and one or two other departments. Each course must be taken for a letter grade. The seven Mathematics Department courses must be completed with a minimum overall grade-point average of 2.0, with grades of C– or better in Mathematics 115A and 131A, as must the seven courses outside mathematics.

It is strongly recommended that students take Mathematics 115A as one of their first upper-division courses for the major.

**Mathematics/Applied Science BS**

The Mathematics/Applied Science major is designed for students with a substantial interest in mathematics and its applications to a particular field. It is an individual major in that students, in consultation with a faculty adviser, design their own program. They may also select one of the established programs: mathematics/history of science plan or medical and life sciences plan. In the past, Mathematics/Applied Science majors have combined the study of mathematics with fields such as atmospheric and oceanic sciences, biochemistry, biology, chemistry, economics, geography, physics, psychology, and statistics.

Students interested in designing an individual program should meet with the undergraduate adviser, 6356 Mathematical Sciences, during their sophomore year. A proposed program is drawn up, then forwarded to the mathematics/applied science curriculum committee for approval. All programs must include the following preparation for the major and major courses.

**Mathematics/Applied Science Premajor**

Students entering UCLA directly from high school or first-term transfer students who want to declare the Mathematics/Applied Science premajor at the time they apply for admission are automatically admitted to the premajor. Current UCLA students need to file a petition with the Undergraduate Advising Office in 6356 Mathematical Sciences. All students are identified as Mathematics/Applied Science premajors until they satisfy the following minimum requirements for the major: (1) achieve grades of C or better in all premajor mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B), (2) achieve a minimum 2.5 grade-point average in the calculus sequence with no more than two repeats, and (3) file a petition to declare the major before completing 160 quarter units.

**Preparation for the Major**

**Required:** Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Program in Computing 10A. Additional preparation, varying with the individual program, may be required. Each course must be taken for a letter grade. The mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B) are calculated separately from the other preparation for the major courses and must be completed with a minimum overall 2.5 grade-point average and a grade of C or better in each course. The other preparation courses must be completed with a minimum overall 2.0 grade-point average and a grade of C– or better in each course.

Repetition of more than two mathematics sequenced courses or of any mathematics sequenced course more than once results in automatic dismissal from the major.

**Freshman Students**

Students must petition to declare the Mathematics/Applied Science major and can do so once they complete all of the mathematics sequenced courses, all of the economics lower-division courses if they are required for the major, and submit an application to enter the major before completing 160 quarter units. Admission into the major is based on student academic performance on the minimum requirements.

**Transfer Students**

Transfer applicants to the Mathematics/Applied Science major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of calculus for majors and one C++ programming course. Additional courses are required for each concentration plan.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

After satisfying the preparation for the major requirements, students need to petition to enter the major at the Undergraduate Advising Office.

**The Major**

**Required:** Fourteen courses, seven in the Mathematics Department selected from Mathematics 106 through 199 and seven upper-division courses in a related field selected from one or two other departments. Each course must be taken for a letter grade. The seven Mathematics Department courses must be completed with a minimum overall grade-point average of 2.0, with grades of C– or better in Mathematics 115A and 131A, as much as the seven courses outside mathematics.

It is strongly recommended that students take Mathematics 115A as one of their first upper-division courses for the major.

At least five of the courses from the related discipline must be taken after the program has been approved. Students are not admitted to the major if they have 135 or more units by the end of the term in which they plan to enter the program.

**Actuarial Plan**

The Undergraduate Council of the UCLA Academic Senate approved the disestablishment of the Actuarial Plan of the Mathematics/Applied Science BS effective fall quarter 2013. No new students can be admitted. Students already in the plan are allowed to complete the requirements for the BS degree.

**Preparation for the Major**

**Required:** Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Economics 1, 2, 11, Program in Computing 10A. Each course must be taken for a letter grade. The economics preparation for the major courses (Economics 1, 2, 11) are calculated separately from the mathematics preparation for the major courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Program in Computing 10A). The economics preparation courses must be completed with a minimum overall 2.5 grade-point average and a grade of
It is strongly recommended that students take Mathematics 115A as one of their first upper-division courses for the major.

Medical and Life Sciences Plan

Preparation for the Major

The mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B) are calculated separately from the other preparation for the major courses and must be completed with a minimum overall 2.5 grade-point average and a grade of C or better in each course.

Preparation of more than two mathematics sequenced courses or of any mathematics sequenced course more than once results in automatic dismissal from the major.

The Major

Required: Seven mathematics courses, including Mathematics 115A, 131A, 170A, 170B, 172B, 172C, 175; four outside courses, including Mathematics 174A (or 174E or Economics 141 or Statistics C183), Statistics 100B, 100C, and one course from Economics 101 through 199B. Each course must be taken for a letter grade.

The seven Mathematics Department courses must be completed with a minimum overall grade-point average of 2.0, with grades of C– or better in Mathematics 115A and 131A, as must the four courses from the Economics and Statistics Departments.

It is strongly recommended that students take Mathematics 115A as one of their first upper-division courses for the major.

Mathematics/History of Science Plan

Preparation for the Major


The mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B) are calculated separately from the other preparation for the major courses and must be completed with a minimum overall 2.5 grade-point average and a grade of C or better in each course. The other preparation courses must be completed with a minimum overall 2.0 grade-point average and a grade of C– or better in each course.

Repetition of more than two mathematics sequenced courses or of any mathematics sequenced course more than once results in automatic dismissal from the major.

The Major

Required: Seven mathematics courses, including Mathematics 115A, 131A, 134, 151A, 170A, 170B, and one course from 110A through 199 and Statistics 100B through 101C; six outside courses, including Neuroscience M101A, M101B, and M101C, and three courses from Biomatics 160, Biostatistics 100A, Chemistry and Biochemistry CM160A, Computer Science CM186, Ecology and Evolutionary Biology C119A, 133, C135, Physiological Science 100, 135, and any additional upper-division course from these fields with consent of the administering department and the Mathematics Department. Each course must be taken for a letter grade.

The seven Mathematics Department courses must be completed with a minimum overall grade-point average of 2.0, with grades of C– or better in Mathematics 115A and 131A, as must the six outside courses.

It is strongly recommended that students take Mathematics 115A as one of their first upper-division courses for the major.

Mathematics for Teaching BS

Capstone Major

The Mathematics for Teaching major is designed primarily for students planning to teach mathematics at the high school level. It provides exposure to a broad range of mathematical topics, especially those appropriate for the prospective teacher. Students planning to pursue graduate studies in mathematics or related fields are encouraged to enter the Mathematics, Applied Mathematics, or Mathematics of Computation major.

Mathematics for Teaching Premajor

Students entering UCLA directly from high school or first-term transfer students who want to declare the Mathematics for Teaching premajor at the time they apply for admission are automatically admitted to the premajor.

Current UCLA students need to file a petition with the Undergraduate Advising Office in 6356 Mathematical Sciences. All students are identified as Mathematics for Teaching premajors until they satisfy the following minimum requirements for the major: (1) achieve grades of C or better in all premajor mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B), (2) achieve a minimum 2.5 grade-point average in the calculus sequence with no more than two repeats, and (3) file a petition to declare the major before completing 160 quarter units.

Preparation for the Major

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61, Physics 1A or 5A, Program in Computing 10A, and two courses from Chemistry and Biochemistry 20A, 20B, Physics 1C, 1B, 1C, 5B, 5C, Program in Computing 10B through 97. Each course must be taken for a letter grade. The mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B) are calculated separately from the other preparation for the major courses and must be completed with a minimum overall 2.5 grade-point average and a grade of C or better in each course. The other preparation courses must be completed with a minimum overall 2.0 grade-point average and a grade of C– or better in each course.

Repetition of more than two mathematics sequenced courses or of any mathematics sequenced course more than once results in automatic dismissal from the major.

Freshman Students

Students must petition to declare the Mathematics for Teaching major and can do so once they complete all of the mathematics sequenced courses and submit an application to enter the major before completing 160 quarter units. Admission into the major is based on student academic performance on the minimum requirements.

Transfer Students

Transfer applicants to the Mathematics for Teaching major and can do so once they complete all of the mathematics sequenced courses and submit an application to enter the major at the Undergraduate Advising Office.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

After satisfying the preparation for the major requirements, students need to petition to enter the major at the Undergraduate Advising Office.

The Major

Required: Mathematics 106, 110A or 117, 115A, 120A or 123, 131A, 170A or Statistics 100A, Statistics 100B, one course from Mathematics 110B through 151H or Statistics 100C, one course from Mathematics 131B through 136, one course from 142 through 167, and a capstone series in the senior year (courses
Honors

Honors Courses

The department offers a lower-division honors sequence in calculus and upper-division honors sequences in algebra and analysis. The sequences are intended for students (not necessarily mathematics majors) who desire a broad, comprehensive introduction to these topics.

Honors Program

Students majoring in Mathematics, Applied Mathematics, and Mathematics of Computation who wish to graduate with departmental honors should apply for admission to the honors program in the Student Services Office. They may apply any time after completing four courses from the calculus sequence or from upper-division mathematics courses with an overall grade-point average of 3.6 or better. The program entails taking a specified sequence of courses as part of the major requirements, completing an approved seminar offered by the Mathematics Department or submitting an original research project, and earning an overall GPA of at least 3.6 in approved upper-division and graduate mathematics courses.

Students completing the program are awarded honors at graduation; if they demonstrate exceptional achievement (i.e., at least a 3.8 GPA in upper-division mathematics courses taken for the major), they are awarded highest honors. Contact the department for further information.

Computing Specialization

 Majors in Mathematics, Applied Mathematics, Financial Actuarial Mathematics, Mathematics/Applied Science, or Mathematics for Teaching may select a specialization in Computing by (1) satisfying all the requirements for a bachelor’s degree in the specified major and (2) completing Mathematics 61 or 180, Program in Computing 10A, 10B, two courses from 10C, 15, 16, 20A, 20B, 30, 40A, 60, and at least two courses from Mathematics 149 through 159, with a minimum grade of C– in each course and a combined grade-point average of at least 2.0. Students must petition for admission to this program and are advised to do so after they complete Program in Computing 10B (petitions should be filed in the Student Services Office). Students graduate with a bachelor’s degree in their major and a specialization in Computing.

Subject Matter Preparation Program for Single Subject Credential in Mathematics

Students interested in obtaining a single subject secondary school credential in mathematics should consult with a departmental counselor regarding the requirements for a waiver from the Mathematics California Subject Examination for Teachers (CSET), which is required by the California Commission on Teacher Credentialing. Students should meet with a departmental counselor as early in their undergraduate careers as possible because the program does require additional courses beyond the major requirements. For additional information on teaching credential requirements, contact the Education Department at 310-825-8328.

Mathematics Minor

The Mathematics minor is designed to provide students with the opportunity to widen their background and general comprehension of the role of mathematics in various disciplines.

To enter the minor, students must have completed all of the lower-division minor courses with grades of C or better (an overall grade-point average of 2.0 or better) and at least one upper-division mathematics course.

Required Lower-Division Courses (12 units): Mathematics 32A, 33A, 33B.

Required Upper-Division Courses (20 units): At least five courses (20 units) selected from Mathematics 106 through 199.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade. Students must complete all lower-division courses with grades of C or better. Upper-division courses must have an overall grade-point average of 2.0 or better that is calculated separately from the lower-division courses. Successful completion of the minor is indicated on the transcript and diploma.

Teaching Secondary Mathematics Minor

The Teaching Secondary Mathematics minor is designed for students majoring in fields other than mathematics who plan to teach secondary mathematics after graduation. The minor recognizes completion of requisite coursework for the Joint Mathematics Education Program and also prepares students for the contents of the California Subject Examination for Teachers (CSET). Post-bachelor credentialing programs will see that students with this minor have taken coursework on secondary mathematics from an advanced standpoint that is recommended by the Conference Board of the Mathematical Sciences and the California Commission on Teacher Credentialing. This minor is open to students in any Mathematics Department major.

To enter the minor, students must have completed Mathematics 115A with a grade of C or better. If Mathematics 115A was not completed at UCLA, students must show proof that they completed an equivalent course with a grade of C or better.

Mathematics

Lower-Division Courses


3A. Calculus for Life Sciences Students. (4) Lecture, three hours; discussion, one hour. Preparation: three and one half years of high school mathematics (including trigonometry). Enforced requisite: successful completion of Mathematics Diagnostic Test (score of 35 or better) or course 1 with grade of C– or better. Not open for credit to students with credit in another calculus sequence. Modeling with functions, limits, and derivatives, decisions and optimization in biology, derivative rules and tools. P/NP or letter grading.

3B. Calculus for Life Sciences Students. (4) Lecture, three hours; discussion, one hour. Requisite: course 3A with grade of C– or better. Not open for credit to students with credit in another calculus sequence. Application of differentiation, integration, differential equations, linear models in biology, phase plane and classifying equilibrium values, bifurcations. P/NP or letter grading.

3C. Ordinary Differential Equations with Linear Algebra for Life Sciences Students. (4) Lecture, three hours; discussion, one hour. Requisite: course 3B with grade of C– or better. Multivariable modeling, matrices and vectors, eigenvalues and eigenvectors, Required Upper-Division Courses (29 units): Mathematics 105A, 105B, 105C, 110A or 117, 115A, 120A or 123, 131A.

It is strongly recommended that students take Mathematics 115A as their first upper-division course for the minor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade with a grade of C– or better in each, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Mathematics offers the Masters of Arts in Teaching (MAT) degree and Master of Arts (MA), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Mathematics.

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linear and nonlinear systems of differential equations, probabilistic applications of integration. P/NP or letter grading.

31A. Differential and Integral Calculus. (4, Lecture, three hours; discussion, one hour. Preparation: at least three years of high school mathematics (including some coordinate geometry and trigonometry). Requisite: successful completion of Mathematics Diagnostic Test or course 1 with grade of C– or better. Differential calculus and applications; introduction to integration. P/NP or letter grading.

31AX. Workshop in Differential Calculus. (1) Discussion, one hour. Corequisite: course 31A. Supplementary techniques and applications for solving problems in differential calculus. Limits of investigation set by individual instructor. P/NP grading.

31B. Integration and Infinite Series. (4) Lecture, three hours; discussion, one hour. Requisite: course 31A with grade of C– or better. Not open for credit to students with credit for course 3B. Transcendental functions; methods and applications of integration; sequences and series. P/NP or letter grading.

31BH. Integration and Infinite Series (Honors). (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 31A with grade of B or better. Honors course parallel to course 31B, P/NP or letter grading.

31BX. Workshop in Integral Calculus. (1) Discussion, one hour. Corequisite: course 31B. Supplementary techniques and applications for solving problems in integral calculus. Limits of investigation set by individual instructor. P/NP grading.

31E. Calculus for Economics Students. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 31A with grade of C– or better. Not open for credit to students with credit for course 3B, 3C, or 31B. Calculus for applications to economics. Partial differentiation, implicit functions, exponential and logarithmic functions, extrema, optimization, constrained optimization. P/NP or letter grading.

32A. Calculus of Several Variables. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 31A with grade of C– or better. Introduction to differential calculus of several variables, vector field theory. P/NP or letter grading.

32AH-32BH. Calculus of Several Variables (Honors). (4-4) Lecture, three hours; discussion, one hour. Enforced requisite: course 32AH: course 31A with grade of B or better; for 32BH: courses 31B and 32A, with grades of B or better. Honors sequence parallel to courses 32A, 32B, P/NP or letter grading.

32B. Calculus of Several Variables. (4) Lecture, three hours; discussion, one hour. Enforced requisite: courses 31B and 32A, with grades of C– or better. Introduction to integral calculus of several variables, line and surface integrals. P/NP or letter grading.

33A. Linear Algebra and Applications. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 3B or 31B or 32A with grade of C– or better. Introduction to linear algebra: systems of linear equations, matrix algebra, linear independence, subspaces, bases and dimension, orthogonality, least-squares methods, determinants, eigenvalues and eigenvectors, matrix diagonalization, and symmetric matrices. P/NP or letter grading.

33AH. Linear Algebra and Applications (Honors). (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 3B or 31B or 32A with grade of B or better. Honors course parallel to course 33A. P/NP or letter grading.

33B. Differential Equations. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 31B with grade of B– or better. Highly recommended: course 33A. First-order, linear differential equations; second-order, linear differential equations with constant coefficients; power series solutions; linear systems. P/NP or letter grading.

33BX. Workshop in Infinite Series and Differential Equations. (1) Discussion, one hour. Corequisite: course 33B. Supplementary techniques and applications for solving problems in infinite series and differential equations. Limits of investigation set by individual instructor. P/NP grading.

61. Introduction to Discrete Structures. (4) Lecture, three hours; discussion, one hour. Requisites: courses 31A, 31B. Not open for credit to students with credit for course 180 or 184. Discrete structures commonly used in computer science and mathematics, including sets and relations, permutations and combinations, graphs and trees, induction, P/NP or letter grading.

71SL. Classroom Practices in Elementary School Mathematics. (2) Seminar, three hours; fieldwork, three hours. Introduction for prospective mathematics teachers to field of elementary education and teaching and learning of mathematics in elementary school classrooms. Pairs of students are placed in local elementary school classrooms to observe, participate, and assist mentor teachers in instruction. P/NP or letter grading.

71BS. Classroom Practices in Secondary School Mathematics. (2) Seminar, 90 minutes; fieldwork, two and one half hours. Requisites: courses 31A and 31B, with grades of B or better. Introduction for prospective mathematics teachers to field of secondary education and teaching and learning of mathematics in middle school classrooms. Pairs of students are placed in local middle school classrooms to observe, participate, and assist mentor teachers in instruction. Discussion of teaching in middle school culture, cognitive differences in children, and cognitive ability of elementary-age children as it relates to introduction of concepts, curricular development, and management. P/NP grading.

72SL. Classroom Practices in Middle School Mathematics. (2) Seminar, 90 minutes; fieldwork, two and one half hours. Requisites: courses 31A and 31B, with grades of B or better. Introduction for prospective mathematics teachers to field of secondary education and teaching and learning of mathematics in middle school classrooms. Pairs of students are placed in local middle school classrooms to observe, participate, and assist mentor teachers in instruction. P/NP grading.

95. Transition to upper-division Mathematics. (4) Lecture, three hours; discussion, one hour. Enforced requisite: courses 31A and 31B, with grades of C– or better. Honors course parallel to course 1 and course 31B, P/NP or letter grading.

110A-110B. Algebra (Honors). (4-4) Lecture, four hours; discussion, one hour. Enforced requisite: courses 31A, 31B, 32A, 33A, 33B. Course 110A is enforced requisite to 110B, which is enforced requisite to 103B. Observation, participation, or tutoring in mathematics classes at middle school and secondary school level may be repeated for credit. P/NP (undergraduates) or S/U (graduates) grading.

110A. Mathematics and Pedagogy for Teaching Secondary School Mathematics. (4) Lecture, four hours; fieldwork, 30 minutes. Requisites: courses 31A, 31B, 32A, 33A, 33B. Course 110A is requisite to 110B, which is requisite to 105C. Mathematical knowledge and research-based pedagogy needed for teaching key geometry topics in secondary school, including axiomatic systems, measure, and geometric transformations. Introduction to professional standards and current research for teaching secondary school mathematics. Letter grading.

110B. Mathematics and Pedagogy for Teaching Secondary School Mathematics. (4) Lecture, four hours; fieldwork, 30 minutes. Requisites: courses 105A, 110A (or 117), 120A (or 123), and 131A, with grades of C– or better. Mathematical knowledge and research-based pedagogy needed for teaching key polynomial, rational, and transcendental functions and related equations in secondary school; professional standards and current research for teaching secondary school mathematics. Letter grading.

110C. Mathematics and Pedagogy for Teaching Secondary School Mathematics. (4) Lecture, four hours; fieldwork, 30 minutes. Requisites: courses 105A, 105B, 110A (or 117), 120A (or 123), and 131A, with grades of C– or better. Mathematical knowledge and research-based pedagogy needed for teaching key polynomial, rational, and transcendental functions and related equations in secondary school; professional standards and current research for teaching secondary school mathematics. Letter grading.

105A. History of Mathematics. (4) Lecture, three hours; discussion, one hour. Requisite: courses 31A, 31B, 32A. Roots of modern mathematics in ancient Babylonia and Greece, including place value number systems and Pythagorean proof. Development through Middle Ages to Fermat and Abel, invention of analytic geometry and calculus. Selected topics. P/NP or letter grading.

Algebra, Number Theory, and Logic

110A-110B. Algebra (Honors). (4-4) Lecture, three hours; discussion, one hour. P/NP or letter grading. 110A. Requisite: course 115A. Not open for credit to students with credit for course 117. Ring of integers, polynomial domains, fields, polynomial domains, unique factorization. 110B. Requisite: course 110A or 117. Groups, rings, fields.

110AH-110BH. Algebra (Honors). (4-4) Lecture, three hours; discussion, one hour. Honors sequence parallel to courses 110A, 110B.
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110C. Algebra. (4) Lecture; three hours; discussion, one hour. Requisites: courses 110A, 110B. Field extensions, Galois theory, applications to geometric constructions, and solvability by radicals.

111. Theory of Numbers. (4) Lecture; three hours; discussion, one hour. Requisites: courses 110A or 117. Arithmetical functions; Diophantine analysis, selected topics in theory of primes, algebraic number theory, Diophantine equations.

114C. Computability Theory. (4) Lecture; three hours; discussion, one hour. Requisite: course 114A or 131A or Philosophy 135. Effective computably, Turing computable, and recursive functions; Church/ Turing thesis, Normal form theorem; universal functions; unsolvability and undecidability results. Recursive and recursively enumerable sets; relative recursiveness, polynomial-time computability. Arithmetical hierarchy. P/NP or letter grading.

114L. Mathematical Logic. (4) Lecture; three hours; discussion, one hour. Requisite: course 110A or 131A or Philosophy 135. Introduction to mathematical logic, aiming primarily at completeness and incompleteness theorems of Godel. Propositional and predicate logic; syntax and semantics; formal deduction; completeness theorems of Godel. Propositional and predicate logic; syntax and semantics; formal deduction; completeness, compactness, and Lowenheim/Skolem theorems. Formal number theory: nonstandard models; Godel incompleteness theorem. P/NP or letter grading.

M114S. Introduction to Set Theory. (4) (Same as Philosophy M134.) Lecture; three hours; discussion, one hour. Requisite: course 110A or 131A or Philosophy 135. Axiomatic set theory as framework for mathematical constructions and functions; numbers, cardinality, axiom of choice, transfinite numbers. P/NP or letter grading.

115A-115B. Linear Algebra. (5-5) P/NP or letter grading. 115A. Lecture; three hours; discussion, two hours. Requisite: course 33A. Techniques of proof, abstract vector spaces, linear transformations, and matrices; determinants; inner product spaces; eigenvalues, eigenvectors; canonical form, complex spaces, symmetric skew and orthogonal linear transformations, polar decomposition.

115AH. Linear Algebra (Honors). (5) Lecture; three hours; discussion, two hours. Requisite: course 33A with grades of B or better. Honors course parallel to course 115A. P/NP or letter grading.

115AX-115BX. Workshops in Linear Algebra. (1-1) Discussion, one hour. Corequisite for course 115AX: course 115A; for 115BX: course 115B. Supplementary team-taught exercises for solving problems in linear algebra. Limits of investigation set by individual instructor. P/NP grading.

115HX. Workshop in Linear Algebra (Honors). (1) Discussion, one hour. Corequisite: course 115AH. Honors course parallel to course 115AX. P/NP grading.

116. Mathematical Cryptology. (4) Lecture; three hours; discussion, one hour. Requisite: course 115A. Not open for credit to students with credit for course in Computing 130. Introduction to mathematical cryptology using methods of number theory, algebra, probability. Topics include symmetric and public-key cryptosystems, one-way functions, signatures, key exchange, groups, primes, pseudoprimes, primality tests, quadratic reciprocity, factoring, rho method, RSA, discrete logs. P/NP or letter grading.

117. Algebra for Applications. (4) Lecture; three hours; discussion, one hour. Requisite: course 115A. Not open for credit to students with credit for course 110A. Integers, congruences; fields, applications of finite fields; polynomials; permutations, introduction to groups.

Geometry and Topology

120A-120B. Differential Geometry. (4-4) Lecture; three hours; discussion, one hour. Requisites: courses 32B, 33B, 115A, 131A. Course 120A is requisite to 120B. Curves in 3-space, Frenet formulas, surfaces in 3-space, normal curvature, Gaussian curvature, congruence of curves and surfaces, intrinsic geometry of surfaces, isometries, geodesics, Gauss/Bonnet theorem. P/NP or letter grading.

121. Introduction to Topology. (4) Requisite: course 111A. Metric and topological spaces, completeness, compactness, connectedness, continuity, homeomorphisms, topological properties.

123. Foundations of Geometry. (4) Lecture; three hours; discussion, one hour. Requisite: course 115A. Axiomatic and synthetic geometry, Hilbert and Tarski axioms, neutral (absolute) geometry, hyperbolic geometry, Poincare model, independence of parallel postulate.

Analysis

131A-131B. Analysis. (4-4) Lecture; three hours; discussion, one hour. P/NP or letter grading. 131A. Requisites: courses 32B, 33B. Recommended: course 115A. Rigorous introduction to foundations of real analysis; real numbers, point set topology in Euclidean space, functions, continuity. 131B. Requisites: courses 33B, 115A, 131A. Derivatives, Riemann integral, sequences and series of functions, power series, Fourier series.

131AH-131BH. Analysis (Honors). (4-4) Lecture; three hours; discussion, one hour. Requisite for course 131AH: courses 32B and 33B, with grades of B or better. Recommended: course 115A. Honors sequence parallel to courses 131A, 131B. P/NP or letter grading.

131AX. Analysis Techniques. (1) Lecture. One hour. Requisite: course 33B. Corequisite: course 131A. Review of elementary techniques of mathematics and their applications to topics in analysis, such as geometric and algebraic constructions, least upper bound axiom, etc. P/NP grading.

131C. Topics in Analysis. (1-1) Lecture; three hours; discussion, one hour. Requisites: courses 131A, 131B. Advanced topics in analysis, such as Lebesgue integral, integration on manifolds, harmonic analysis. Content varies from year to year. May be repeated for credit by petition.

132. Complex Analysis for Applications. (4) Lecture; three hours; discussion, one hour. Requisites: courses 32B, 33B. Introduction to basic formulas and calculation procedures of complex analysis of one variable relevant to applications. Topics include Cauchy/Riemann equations, Cauchy integral formula, power series expansion, contour integrals, residue calculus.

132H. Complex Analysis (Honors). (4) Lecture; three hours; discussion, one hour. Requisites: courses 32B, 33B, and 131A, with grades of B or better. Specifically designed for students who have strong commitment to pursue graduate studies in mathematics. Introduction to complex analysis, with more emphasis on proofs. Honors course parallel to course 132. P/NP or letter grading.

133. Introduction to Fourier Analysis. (4) Lecture; three hours; discussion, one hour. Requisites: courses 33A, 33B, 131A. Fourier series, Fourier transform in one and several variables, finite Fourier transform. Applications, in particular, to solving differential equations. Fourier inversion formula, Plancherel theorem, convergence of Fourier series, convolution, P/NP or letter grading.


136. Partial Differential Equations. (4) Lecture; three hours; discussion, one hour. Requisites: courses 33A, 33B. Linear partial differential equations, boundary value problems, Green’s function, Laplace equation, separation of variables, eigenfunction expansions; selected topics, as method of characteristics for nonlinear equations.

Applied Mathematics

142. Mathematical Modeling. (4) Lecture; three hours; discussion, one hour. Requisites: courses 32B, 33B. Introduction to fundamental principles and spirit of applied mathematics. Emphasis on manner in which mathematical models are constructed for physical problems. Illustrations from many fields of endeavor, such as physical sciences, biology, economics, and traffic dynamics.

143. Analytic Mechanics. (4) Lecture; three hours; discussion, one hour. Requisites: courses 33A, 33B. Foundations of Newtonian mechanics, kinematics and dynamics of a rigid body, Lagrange’s principles and Lagrange equations; calculus of variations, variable mass; related topics in applied mathematics.

146. Methods of Applied Mathematics. (4) Lecture; three hours; discussion, one hour. Requisite: course 33B. Introduction to advanced topics in applied mathematics, including asymptotic expansions, singular perturbations, boundary layers, integral equations, Green’s function, and calculus of variations. Selected applications from control theory, optics, dynamical systems, and other engineering problems.

149. Mathematics of Computer Graphics. (4) Lecture; two hours; discussion, one hour. Requisite: course 115A and Program in Computing 10A or equivalent knowledge of programming in either Pascal or C language. Study of homogenous coordinate transformations, matrix manipulation and approximating curves, representation of surfaces, and other mathematical topics useful for computer graphics.


167. Mathematical Game Theory. (4) Lecture; four hours; discussion; one hour. Enforced requisites: course 115A. Quantitative modeling of strategic interaction. Topics include extensive and normal form games, background probability, lotteries, mixed strategies, pure and mixed Nash equilibria, and refinements. Emphasis on understanding important economic applications. P/NP or letter grading.

170A. Probability Theory. (4) Lecture; three hours; discussion; one hour. Requisites: courses 32B, 33A. Not open to students with credit for Electrical Engineering 131A. Probability distributions, random variables and vectors, expectation. P/NP or letter grading.


172A. Actuarial Models I. (4) Lecture; four hours. Enforced requisites: courses 170A and 170B (or Statistics 100A and 100B), 175. Designed to prepare students for Society of Actuaries Models for Life Continuities examination. Provides understanding of the theoretical basis of certain actuarial models and application of those models to insurance, pensions, and other financial risks. Letter grading.


173B. Casualty Loss Models II. (4) Lecture; four hours. Enforced requisite: course 173A. Designed to prepare students for Society of Actuaries Construction and Evaluation of Actuarial Models examination. Construction of casualty loss models and introduction to credibility theory that provides tools to utilize collected information, such as past loss information, to predict future outcomes. Use of simulation to model future events. Letter grading.


176. Communication for Actuarial Students. (2) Seminar; two hours; preparation: PowerPoint or alternative slide/grapics software. Enforced requisite: course 175. Enrollment priority to departmental majors. Designed to strengthen technical communication skills, with focus on principles and practice of oral communication for actuarial students, including persuasive speaking, group presentation, self-presentation, and managing behavioral questioning. P/NP grading.

178. Algorithms. (4) Lecture; three hours; discussion; one hour. Enforced requisite: course 3C or 32A. Not open for credit to students with credit for Computer Science 180. Graphs, greedy algorithms, divide and conquer algorithms, dynamic programming, network flow. Emphasis on designing efficient algorithms useful in diverse areas such as bioinformatics and allocation of resources. P/NP or letter grading.


182. Algorithms. (4) Lecture; three hours; discussion; one hour. Enforced requisite: course 3C or 32A. Not open for credit to students with credit for Computer Science 180. Graphs, greedy algorithms, divide and conquer algorithms, dynamic programming, network flow. Emphasis on designing efficient algorithms useful in diverse areas such as bioinformatics and allocation of resources. P/NP or letter grading.


Special Studies


191. Variable Topics Research Seminars: Mathematics. (4) Seminar, three hours. Variable topics researched in mathematics that are not covered in regular mathematics upper-division curriculum. Reading, discussion, and development of culminating project. May be repeated for credit with instructor and approval of department. Limited to juniors or seniors.

191H. Honors Research Seminars: Mathematics. (4) Seminar, three hours. Participating seminar on advanced topics in mathematics. Content varies from year to year. May be repeated for credit by petition. P/NP or letter grading.

195. Community Internships in Mathematics Education. (4) Tutorial, to be arranged. Limited to juniors/seniors. Internship to be supervised by Center for Community Learning and Mathematics Department. Students meet on regular basis with instructor, provide periodic reports of their experience, have assigned readings on mathematics education, and complete final paper. May not be repeated and may not be used toward major requirements. Individual contract with supervising faculty member required. P/NP grading.

197. Individual Studies in Mathematics. (2 to 4) Tutorial; three hours per week per unit. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Sched- uled meetings to be arranged between faculty member and student. Culminating report required. May be repeated for maximum of 12 units, but no more than one 197 or 199 course may be applied toward upper-division courses required for majors offered by Mathematics Department. Individual contract required. P/NP or letter grading.

199. Directed Research or Senior Project in Mathematics. (2 or 4) Tutorial, three hours per week per unit. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Sched- uled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for maximum of 12 units, but no more than one 197 or 199 course may be applied toward upper-division courses required for majors offered by Mathematics Department. Individual contract required. P/NP or letter grading.

Graduate Courses

Teacher Preparation

201A-201B-201C. Topics in Algebra and Analysis. (4-4-4) Preparation: bachelor's degree in mathematics. Designed for mathematics/education program students. Important ideas of algebra, geometry, and calculus leading effectively from elementary to modern mathematics. Approaches to number system, point sets, geometric interpretations of algebra and analysis, integration, differentiation, series and analytic functions. May not be applied toward MA degree requirements.

202A-202B. Mathematical Models and Applications. (4-4-4) Preparation: bachelor's degree in mathematics. Designed for mathematics/education program students. Development of mathematical theories describing various empirical situations. Basic characterizing postulates; development of a logical structure of theorems. Modern topics such as operations research, linear programming, game theory, learning models, models in social and life sciences. May not be applied toward MA degree requirements.

203. Master's Linear Algebra. (4) Lecture; four hours; discussion; one hour. Rigorous treatment of fundamental results of pure and applied linear algebra over fields. Applications to contemporary research. Prerequisite: Linear Algebra or equivalent. P/NP grading. 190J. Applied Mathematics Basic Examination that is required of MA and PhD students. S/U or letter grading.
Number Theory

205A-205B-205C. Number Theory. (4-4-4) Lecture, three hours. Requisites: courses 210A, 246A. Algebraic number theory, including ideal theory, valuations, local fields, cyclotomic fields. Introduction to class-field theory, analytic number theory, L-functions and class number formulas, and modular forms. S/U or letter grading.


207A-207B-207C. Topics in Number Theory. (4-4-4) Lecture, three hours. Adelic analysis on GL(1) and GL(2), especially Tate thesis and Hecke theory, automorphic forms, spectral values L-functions and p-adic L-functions, arithmetic theory of modular forms, advanced topics in analytic number theory. Arithmetic geometry, especially of modular curves, S/U or letter grading.


M209A. Cryptography. (4) (Same as Computer Science M282A.) Lecture, four hours; discussion, one hour. Introduction to theory of cryptography, stressing rigorous definitions and proofs of security. Topics include notions of hardness, one-way functions, hard-core bits, pseudorandom generators, pseudorandom functions and pseudorandom permutations, one-way functions, zero-knowledge proof systems, public key cryptography, hash functions, commitments, protocol proofs, key-agreement, contract signing, and two-party secure computation with static security. Letter grading.

M209B. Cryptographic Protocols. (4) (Same as Computer Science M282B.) Lecture, four hours. Requisite: course M209A. Consideration of advanced cryptographic protocol design and analysis. Topics include noninteractive zero-knowledge proofs; zero-knowledge arguments; concurrent and non-black-box zero-knowledge; IP=PSPACE proof, stronger notions of security for public-key encryption, including chosen-ciphertext security; secure multiparty computation; zero-knowledge encryption, and black-box simulation; homomorphic encryption, and black-box simulation; hard-core functions, commitments, protocol proofs, key-agreement, contract signing, and two-party secure computation with static security. Letter grading.

Algebra

210A-210B-210C. Algebra. (4-4-4) Requisites: courses 110A, 110B, 110C. Students with credit for courses 110B and/or 110C cannot receive MA degree credit for courses 210B and/or 210C. Group theory, including theories of Sylow and Jordan/Holder/Schreier; rings and ideals, factorization theory in integral domains, modules over principal ideal rings, Galois theory of fields, multilinear algebra, structure of algebras.

211. Structure of Rings. (4) Requisite: course 210A. Radical, irreducible modules and primitive rings, rings and algebras with minimal condition.

212A. Homological Algebra. (4) (Formerly numbered 212B.) Lecture, three hours. Enforced requisite: course 210A. Modules over rings, homomorphisms and tensor products of modules, functors and derived functors, theory of resolutions of rings and modules. S/U or letter grading.

212B. Homological Algebra. (4) Lecture, three hours. Requisites: courses 210A, 210B, 210C. 212C. Advanced topics in modern homological algebra, such as triangulated categories, differential graded algebras as dg-categories, tilting theory and applications of group cohomology to representation theory, stable categories and modular representation theory, and other current topics. S/U or letter grading.

213A-213B. Theory of Groups. (4-4) Requisite: course 210A. Topics include representation theory, transfer theory, infinite Abelian groups, free products and presentations of groups, soluble and nilpotent groups, classifying soluble groups.

214A-214B. Introduction to Algebraic Geometry. (4-4) Requisite: course 210A. Basic definitions and first properties of algebraic varieties in affine and projective spaces, singular and smooth points. More advanced topics, such as sheaves and their cohomology, or introduction to theory of Riemann surfaces, as time permits.

215A-215B. Commutative Algebra. (4-4) Requisite: course 210A. Topics from commutative ring theory, including techniques of localization, prime ideal structure in commutative Noetherian rings, principal ideal domains, Dedekind rings, modules, projective modules, Serre's conjecture, regular rings.

216A-216B-216C. Further Topics in Algebra. (4-4-4) Lecture, three hours. Requisites: courses 210A, 210B, 210C. Closer examination of areas of current research in algebra, including algebraic geometry and K-theory. Variable content may include Abelian varieties, invariant theory, Hodge theory, geometry over finite fields, K-theory, homological algebra, and derived algebraic geometry. May be repeated for credit by petition. S/U or letter grading.

M217. Geometry and Physics. (4) (Same as Physics M223B.) Lecture, three hours. Requisite: course 210A. Introduction to topics on algebraic geometry, with applications to theoretical physics. May be repeated for credit with consent of instructor. S/U or letter grading.

220A-220B-220C. Mathematical Logic. (4-4-4) Lecture, three hours. Requisite: course M114S. Fundamentals of mathematical logic, using mathematical methods to reason about existence or nonexistence of proofs and computations in many different settings. Topics include computability theory, robustification of models, completeness and incompleteness theorems of Gödel, Turing computability and degrees of unsolvability, recursion in Baire space, Zermelo-Fraenkel axioms, universe of constructible sets, and related equivalence results in set theory. S/U or letter grading.

222A-222B. Logic and Computational Complexity. (4-4) Lecture, three hours. Requisite: course 210A. Proving ordered sets, modularity, completeness, interaction with combinatorics, topology, and logic; algebraic systems, congruence lattices, subdirect decomposition, congruence lattices, equational bases, applications to lattices.

223C. Topics in Computability Theory. (4) Lecture, three hours. Requisites: courses 220A, 220B. Classical and effective results on Borel and projective sets; infinite games of perfect information and principle of determinacy; consequences of determinacy, including periodicity, structure theory of pointclasses, and partition properties. Topics vary from year to year. May be repeated for credit with consent of instructor. S/U or letter grading.

223D. Topics in Descriptive Set Theory. (4) Lecture, three hours. Requisites: courses 220A, 220B. Classical and effective results on Borel and projective sets; infinite games of perfect information and principle of determinacy; consequences of determinacy, including periodicity, structure theory of pointclasses, and partition properties. Topics vary from year to year. May be repeated for credit with consent of instructor. S/U or letter grading.

225. Topics in Model Theory. (4) Lecture, three hours. Requisites: courses 220A, 220B. Ultraproducts, preservation theorems, interpolation theorems, saturated models, omitting types, categoricity, two cardinal theorems, enriched languages, soft model theory, and applied model theory. Topics vary from year to year. May be repeated for credit with consent of instructor. S/U or letter grading.

227. Topics in Theoretical Computer Science. (4) Lecture, three hours. Requisites: courses 220A, 220B. Classical and effective results on Borel and projective sets; infinite games of perfect information and principle of determinacy; consequences of determinacy, including periodicity, structure theory of pointclasses, and partition properties. Topics vary from year to year. May be repeated for credit with consent of instructor. S/U or letter grading.

225A. Differential Topology. (4) Lecture, three hours; discussion, one hour. Manifolds, tangent vectors, smooth maps, tangent bundles and vector bundles in general, vector fields and integral curves, Sard theorem on measure of critical values, embedding theorem, transversality, degree theory, Lefschetz fixed-point theorem, Euler characteristic, Ehresmann theorem that proper submersions are locally trivial fibrations, S/U or letter grading.

225B. Differential Geometry. (4) Lecture, three hours; discussion, one hour. Lie derivatives, integrable distributions and Frobenius theorem, differential forms, integration and Stokes theorem, de Rham cohomology, including Mayer-Vietoris sequence, Poincare duality, Thom classes, degree theory and Euler characteristic revisited from viewpoint of de Rham cohomology, Riemanian metrics, gradients, volume forms, and generalizations of integral theorems as aspects of Stokes theorem for differential forms. S/U or letter grading.

225C. Algebraic Topology. (4) Lecture, three hours; discussion, one hour. Homotopy theory, fundamental group and covering spaces, singular homology and cohomology theory, axioms of homology theory, Mayer-Vietoris sequence, calculation of homology and cohomology of standard spaces, cell complexes and cellular homology, de Rham the-
om om isomorphism of de Rham differential-form cohomology and singular cohomology with real coefficients. S/U or letter grading.

226A-226B-226C. Differential Geometry. (4-4-4) Lecture, three hours. Requisite: course 225A. Manifold theory; connections, curvature, torsion, and parallelism. Riemannian manifolds; completeness, submanifolds, constant curvature. Geodesics; conjugate points, variational methods, Myers theorem, nonpositive curvature. Further topics such as pinched manifolds, integral geometry, Kahler manifolds, symmetric spaces.


233. Partial Differential Equations on Manifolds. (4) Lecture, three hours. Requisites: courses 226A, 226B. Topics may include Laplacian operator on a Riemannian manifold, eigenvalues, elliptic/Sobolev index theorem, isoperimetric inequalities, elliptic estimates, harmonic functions, function theory on manifolds, Green’s function, heat equation, minimal hyper-surfaces, prescribed curvature equations, harmonic maps, Yang-Mills equation, Monge/Ampere equations.

234. Topics in Differential Geometry. (4) Lecture, three hours. Requisites: courses 226A, 226B. Complex and Kahler geometry. Hodge theory, homogeneous manifolds and symmetric spaces, finiteness and compactness theorems for Riemannian manifolds, almost flat manifolds, closed geodesics, manifolds of positive scalar curvature, manifolds of constant curvature. Topics vary from year to year. May be repeated for credit by petition.


236. Topics in Geometric Topology. (4) Lecture, three hours. Requisites: courses 225A, 225B. Decomposition theory, group actions, dimension theory, infinite dimensional topology. Topics vary from year to year. May be repeated for credit by petition.

237. Topics in Algebraic Topology. (4) Lecture, three hours. Requisites: courses 227A, 227B. Fixed-point theory, fiber spaces and classifying spaces, characteristic classes, generalized homology and cohomology theories. Topics vary from year to year. May be repeated for credit by petition.

238A-238B. Dynamical Systems. (4-4) Lecture, three hours. Recommended preparation: first-year analysis courses. Topics include qualitative theory of differential equations, bifurcation theory, and Hamiltonian systems; differential dynamics, including hyperbolic theory and quasi-periodic dynamics; ergodic theory; low-dimensional dynamics. S/U or letter grading.

Analysis and Differential Equations


250C. Advanced Topics in Ordinary Differential Equations. (4) Requisites: courses 250A, 250B. Selected topics, such as spectral theory or ordinary differential operators, nonlinear boundary value problems, celestial mechanics, approximation of solutions, and Volterra equations.


251B-251C. Topics in Partial Differential Equations. (4-4) In-depth introduction to topics of current interest in partial differential equations or their applications.


254A-254B. Topics in Real Analysis. (4-4) Requisites: courses 245A, 245B, 245C, 246A, 246B, 246C. Selected topics in analysis and its applications to geometry and differential equations. Topics may vary from year to year. May be repeated for credit by petition.

Functional Analysis


255B-255C. Topics in Functional Analysis. (4-4) Requisite: course 255A. Topics include Banach algebras, operators on Banach spaces and Hilbert space, semigroups of operators, linear topological vector spaces, and other related areas.


Applied Mathematics


Program in Computing

Lower-Division Courses

1. Introduction to Computers and Programming. (4) Lecture, three hours; laboratory, one hour. Not open for credit to students with credit for course 1S or 10A; may not be taken concurrently with course 1S or 10A. Fundamentals of computers and computing; editors, spreadsheets, file manager; machine organization and computer architecture; Internet; software applications. P/NP or letter grading.

2. Introduction to Programming. (5) Lecture, three hours; laboratory, eight hours. Enforced requisite: course 10A. Basic principles of object-oriented programming and concepts, with applications from social sciences and humanities. Overview of Java programming language, programming with objects, control structures and functions, classes and object-oriented design, event-driven programming, application to multiagent models. P/NP or letter grading.

3. Introduction to Computing for Social Sciences and Humanities. (4) Lecture, three hours; discussion, two hours. No prior programming knowledge required. Not open for credit to students pursuing specialization in Computing or to students with credit for course 20A. Basic principles of object-oriented programming and concepts, with applications from social sciences and humanities. Overview of Java programming language, programming with objects, control structures and functions, classes and object-oriented design, event-driven programming, application to multiagent models. P/NP or letter grading.

4. Advanced Topics in Programming. (5) Lecture, three hours; discussion, two hours; laboratory, eight hours. Enforced requisite: course 10A. Further aspects of computer science, graphics components, exception handling, multi-threading, and multimedia. Additional topics may include networking, servers, database connectivity, and JavaBeans. P/NP or letter grading.

5. Seminar: Enterprise Computing with Java. (5) Lecture, three hours; discussion, two hours; laboratory, eight hours. Requisites: course 20B. Overview of Enterprise Java APIs: remote method invocation, database access with SQL, servlets, and JSP. Issues in implementation of server-side Java applications. Use of tools with XML, JavaBeans. S/U or letter grading.

6. Advanced Aspects of Java Language with Applications. (5) Lecture, three hours; discussion, two hours; laboratory, eight hours. Enforced requisite: course 20A. Further aspects of use of classes, graphics components, exception handling, multi-threading, and multimedia. Additional topics may include networking, servers, database connectivity, and JavaBeans. P/NP or letter grading.

7. Machine Organization and Assembly Language Programming. (5) Lecture, three hours; discussion, two hours; laboratory, eight hours. Enforced requisite: course 10A. Description of machine organization and operation. Representation of information, instruction sets and formats, addressing modes, memory organization and management, input/output (I/O) processing and interrupts. P/NP or letter grading.

8. Introduction to Programming for Internet. (5) Lecture, three hours; discussion, two hours; laboratory, eight hours. Enforced requisite: course 10A. Introduction to core technologies of Internet, with focus on client-side Web programming. Fundamental protocols, static Web pages,Perl language, Common Gateway Interface, XML. P/NP or letter grading.

9. Advanced Topics in Programming for Internet. (5) Lecture, three hours; discussion, two hours; laboratory, eight hours. Enforced requisite: course 10A. Advanced aspects of Web programming, with focus on server-side technologies. P/NP or letter grading.


11. Cryptography. (4) Lecture, three hours; discussion, one hour, laboratory, three hours. Requisites: course 10B, Mathematics 115A. Design and analysis of cryptosystems for confidentiality and authentication. Classical cryptosystems and their security, modern public-key cryptosystems and applications, public-key cryptography and applications; generating prime numbers, factoring integers, discrete logarithms, digital signatures, perfect secrecy. P/NP or letter grading.

187. Advanced Variable Topics in Programming. (5) Lecture, three hours; discussion, one hour. Variable topics in programming and mathematics of programming not covered in regular program in computing courses. May be repeated for credit with topic change. P/NP or letter grading.

Graduate Courses


375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprenticeship experience at a professional level in academic, government, or private enterprise. May be repeated for credit. S/U grading.

MATHEMATICS/ATMOSPHERIC AND OCEANIC SCIENCES

Interdepartmental Program
College of Letters and Science

7127 Mathematical Sciences
Box 951565
Los Angeles, CA 90095-1565
310-825-1217
depinfo@atmos.ucla.edu
http://www.atmos.ucla.edu/students/undergraduate/math-aos-joint-program

J. David Neelin, PhD, Chair
Faculty Committee
Christopher R. Anderson, PhD (Mathematics)
J. David Neelin, PhD (Atmospheric and Oceanic Sciences)
Andrew L. Stewart, PhD (Atmospheric and Oceanic Sciences)

Scope and Objectives

The Mathematics/Atmospheric and Oceanic Sciences BS degree program is designed for students who have an interest in and talent for both subjects. Students completing the major are well-qualified for graduate study in the most demanding graduate programs in atmospheric sciences, oceanic sciences, or applied mathematics. Postgraduate training leads to employment at a professional level in academia, government, or private enterprise. Opportunities outside academia include environ-
mental agencies, consulting companies, and governmental agencies such as NASA, National Oceanic and Atmospheric Administration (NOAA), National Center for Atmospheric Research (NCAR), Department of Energy (DOE), and the military, the Air Force and Navy in particular.

Graduates of the program are employed by private and public weather products firms, consulting companies, public utilities, and as science teachers at the elementary and secondary levels.

**Undergraduate Study**

The Mathematics/Atmospheric and Oceanic Sciences major is a designated capstone major. Students acquire experience in conceiving and executing research projects designed to evaluate hypotheses and complete an individual project or thesis selected with the assistance of the program advisers and faculty mentor. The topic should reflect integrative application of mathematics to atmospheric and oceanic sciences. Students are expected to prepare a significant independent piece of work that applies knowledge gained in their coursework in a new and unique way.

**Mathematics/Atmospheric and Oceanic Sciences BS**

**Capstone Major**

**Preparation for the Major**

**Required:** Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Physics 1A, 1B, 1C, Program in Computing 10A, and two courses selected from Atmospheric and Oceanic Sciences 1, 2, 3, 5, Physics 4AL and 4BL are recommended but not required. Chemistry and Biochemistry 14A and 14B (or 20A and 20B) may also be required, depending on atmospheric and oceanic sciences upper-division course selection. Each course must be taken for a letter grade and must be passed with a grade of C– or better, and students must have a minimum overall grade-point average of 2.0 for the courses.

**Transfer Students**

Transfer applicants to the Mathematics/Atmospheric and Oceanic Sciences major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of calculus for majors, physics courses equivalent to Physics 1A, 1B, and 1C, and one C++ programming course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

**The Major**

**Required:** Six mathematics courses, including Mathematics 115A, 131A, 134, and three elective courses selected from 115B, 131B, 135, 136, 142, 151A, 151B, 170A, 170B, one of which must be 115B, 131B, 151B, or 170B; six atmospheric and oceanic sciences courses, including three core courses selected from Atmospheric and Oceanic Sciences 101, 102, 103, 104, M105, and three elective courses selected from the five listed above (if not taken to satisfy the core requirement) or from C110, C115, M120, 130, 145, C160, C170, 180.

One capstone senior projects/thesis course, Atmospheric and Oceanic Sciences 199, taken for a minimum of 2 units, is also required. An individual project or thesis to be selected with the assistance of the program advisers and a faculty mentor must be completed.

No more than one course may be applied toward both this major and a major or minor in another department or program.

**MATHEMATICS/ECONOMICS**

**Interdepartmental Program**

**College of Letters and Science**

6363 Mathematical Sciences
Box 951555
Los Angeles, CA 90095-1555
310-206-1286
ugrad@math.ucla.edu
http://www.math.ucla.edu/ugrad/majors/mathecon

Don M. Blasius, PhD, Co-Chair
Ichiro Obara, PhD, Co-Chair

Faculty Committee
Don M. Blasius, PhD (Mathematics)
Robert F. Brown, PhD (Mathematics)
Russel E. Caflisch, PhD (Management, Materials Science and Engineering, Mathematics)
Ichiro Obara, PhD (Economics)
Peter Petersen, PhD (Mathematics)
Marek G. Pycia, PhD (Economics)
John G. Riley, PhD (Economics)

**Scope and Objectives**

In recent years economics has become increasingly dependent on mathematical methods, and the mathematical tools it employs have become more sophisticated. Mathematically competent economists, with bachelor's degrees and with advanced degrees, are needed in industry and government. Graduate programs in economics and finance programs in graduate schools of management require strong undergraduate preparation in mathematics for admission.

The Mathematics/Economics BS degree program is designed to give students a solid foundation in both mathematics and economics, stressing those areas of mathematics and statistics that are most relevant to economics and the parts of economics that emphasize the use of mathematics and statistics. It is ideal for students who may wish to complete a higher degree in economics.

**Undergraduate Study**

**Mathematics/Economics BS**

**Mathematics/Economics Premajor**

Students entering UCLA directly from high school or first-term transfer students who want to declare the Mathematics/Economics premaj or at the time they apply for admission are automatically admitted to the premajor.

Current UCLA students need to file a petition with the Undergraduate Advising Office in 6356 Mathematical Sciences. All students are identified as Mathematics/Economics premajors until they satisfy the following minimum requirements for the major: (1) achieve grades of C– or better in all premajor mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61, Program in Computing 10A) with a minimum 2.7 grade-point average and no more than two repeats, (2) achieve grades of C or better in all premajor economics courses (Economics 1, 2, 11) with a minimum 2.7 grade-point average and no more than one repeat, and (3) file a petition to declare the major before completing 160 quarter units.

**Preparation for the Major**

**Required:** Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61, Economics 1, 2, 11, Program in Computing 10A, one Writing II course. Each course must be taken for a letter grade. The economics preparation for the major courses (Economics 1, 2, 11) are calculated separately from the mathematics preparation for the major courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61, Program in Computing 10A). The economics preparation courses must be completed with a minimum overall 2.7 grade-point average and a grade of C or better in each course, as must the mathematics preparation courses. Students must receive a grade of C or better in the Writing II course.

Repetition of more than one economics preparation course, more than two mathematics preparation courses, or of any economics or mathematics preparation course more than once results in automatic dismissal from the major.

**Transfer Students**

Transfer applicants to the Mathematics/Economics major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of calculus for majors, one introduction to discrete structures course, one microeconomic theory course, one macroeconomic course, and one C++ programming course.

Transfer credit for any of the above is subject to department approval; consult with an undergraduate counselor before enrolling in any courses for the major.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

**The Major**

**Required:** Eight mathematics courses, including Mathematics 115A, 131A, 131B, 164, 170A, 170B, 174E (or 174A or Economics 141 or Statistics C183), and one elective course from Mathematics 135, 136, or 171; five economics courses, including Economics 101, 102, 103 (with 103L), and two additional courses from 106E through 199B. Each course must be taken for a letter grade. Transfer credit
is subject to department approval; consult with an undergraduate counselor before enrolling in any courses for the major.

To graduate, the eight Mathematics Department courses must be completed with an overall grade-point average of 2.0, with grades of C– or better in Mathematics 115A and 131A, as must the five courses from the Economics Department, with grades of C– or better in Economics 101 and 102.

It is strongly recommended that students take Mathematics 115A as one of their first upper-division courses for the major.

Honors Program

Students who wish to graduate with departmental honors should apply for admission to the honors program in the Mathematics Department Student Services Office. They may apply any time after completing the preparation for the major courses and meeting the following requirements: (1) be officially enrolled in the Mathematics/Economics major, (2) complete all the preparation for the major courses, (3) achieve a minimum 3.5 grade-point average in the mathematics preparation for the major courses, (4) achieve a minimum 3.5 grade-point average in the economics preparation for the major courses, and (5) achieve a minimum 3.5 grade-point average in Economics 11, 101, and 102.

To qualify for honors at graduation, students must (1) complete Mathematics 115AH, 131AH, and 131BH, (2) complete Economics 198A and 198B (the thesis process requires enrollment in a two-term sequence for economics courses), (3) present the thesis in Economics 198B, and (4) complete the major requirements with a minimum 3.5 grade-point average in both the upper-division economics and mathematics courses. Highest honors are awarded at the discretion of the departmental honors committee based on grade-point average and quality of the senior thesis.

Computing Specialization

Students may select a specialization in Computing by (1) satisfying all the requirements for a bachelor's degree in the major and (2) completing Mathematics 61 or 180, Program in Computing 10A, 10B, two courses from 10C, 15, 16, 20A, 20B, 30, 40A, 60, and at least two courses from Mathematics 149 through 159, with a minimum grade of C– in each course and a combined grade-point average of at least 2.0. Students must petition for admission to the program and are advised to do so after they complete Program in Computing 10B (petitions should be filed in the Mathematics Department Student Services Office). Students graduate with a bachelor's degree in mathematics/economics and a specialization in Computing.
Aerospace Engineering BS

Capstone Major

The aerospace engineering program is concerned with the design and construction of various types of fixed-wing and rotary-wing (helicopters) aircraft used for air transportation and national defense. It is also concerned with the design and construction of spacecraft, the exploration and utilization of space, and related technological fields.

Aerospace engineering is characterized by a very high level of technology. The aerospace engineer is likely to operate at the forefront of scientific discoveries, often stimulating these discoveries and providing the inspiration for the creation of new scientific concepts. Meeting these demands requires the imaginative use of many disciplines, including fluid mechanics and aerodynamics, structural mechanics, materials and aeroelasticity, dynamics, control and guidance, propulsion, and energy conversion.

Preparation for the Major

Required: Chemistry and Biochemistry 20A, 20B, 20L; Mathematics 31A, 31B, 32A, 32B, 33A; Mechanical and Aerospace Engineering 20 (or Computer Science 31), 82; Physics 1A, 1B, 1C, 4AL, 4BL.

The Major

Required: Electrical Engineering 110L, Mechanical and Aerospace Engineering 101, 102, 103, 105A, 105D, 107, 131A or 133A, 156A, 157, 162A, 171A, 183A (or M183B); two departmental breadth courses (Electrical Engineering 100 and Materials Science and Engineering 104)—if one or both of these courses are taken as part of the technical breadth requirement, students must select a replacement upper-division course or courses from the department—except for Mechanical and Aerospace Engineering 156A—or, by petition, from outside the department); three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; two capstone design courses (Mechanical and Aerospace Engineering 162D, 162E); and two major field elective courses (8 units) from Mechanical and Aerospace Engineering 131A (unless taken as a required course), C132A, 133A (unless taken as a required course), 135, 136, C137, CM140, CM141, 150A, 150B, 150C, C150G, C150P, C150R, 153A, 154S, 155, C156B, C157A, C158A, 161A through 161D, 166C, M168, 169A, 171B, 172, 174, C175A, 181A, 182B, 182C, 183A (unless taken as a required course), M183B (unless taken as a required course), C183C, 184, 185, C186, C187L.

For information on University and general education requirements, see the College and Schools chapter earlier in this catalog.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Mechanical and Aerospace Engineering offers the Master of Science (MS) degree in Manufacturing Engineering, Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Aerospace Engineering, and Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Mechanical Engineering.

Mechanical and Aerospace Engineering

Lower-Division Courses

1. Undergraduate Seminar. (1) Seminar; one hour; outside study, two hours. Introduction by faculty members and industry lecturers to mechanical and aerospace engineering disciplines through current and emerging applications in aerospace, medical instrumentation, automotive, entertainment, energy, and manufacturing industries. P/NP grading.


94. Introduction to Computer-Aided Design and Drafting. (4) Lecture, two hours; laboratory, four hours. Fundamentals of computer graphics and two- and three-dimensional modeling on computer-aided design and drafting systems. Students use one or more online computer systems to design and display various objects. Letter grading.

Upper-Division Courses


102. Dynamics of Particles and Rigid Bodies. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: course 101, Mathematics 33A, Physics 1A. Fundamental concepts of Newtonian mechanics. Kinematics and kinetics of particles and rigid bodies in two and three dimensions. Impulse-momentum and work-energy relationships. Applications. Letter grading.

103. Elementary Fluid Mechanics. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: Mathematics 32B, 33A, Physics 1B. Introductory course dealing with application of principles of mechanics to flow of compressible and incompressible fluids. Letter grading.

105A. Introduction to Engineering Thermodynamics. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: Chemistry 20B, Mathematics 32B. Phenomenological thermodynamics. Concepts of temperature, and reversibility. First law and concept of energy; second law and concept of entropy. Equations of state and
thermodynamic properties. Engineering applications of these principles in analysis and design of closed and open systems. Letter grading.

105D. Transport Phenomena. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 82, 103, 105A. Transport phenomena; heat conduction, mass species diffusion, convective heat and mass transfer, and radiation. Engineering applications in thermal and environmental control. Letter grading.

107. Introduction to Modeling and Analysis of Dynamic Systems. (4) Lecture, four hours; discussion, one hour; laboratory, two hours; outside study, five hours. Enforced requisites: courses 250 (or Computer Science 105A) and introduction to modeling of physical systems, with examples of mechanical, fluid, thermal, and electrical systems. Description of these systems with coverage of impulse response, correlation, frequency response, first- and second-order system transient response analysis, and numerical solution. Nonlinear differential equation descriptions with discussion of equilibrium, small signal linearization, large signal response. Block diagram representation and response of interconnections of systems. Hands-on experiments reinforce lecture material. Letter grading.

131A. Intermediate Heat Transfer. (4) Lecture, four hours; discussion, two hours; outside study, one hour; laboratory, two hours; outside study, six hours. Enforced requisites: courses 250 (or Civil Engineering 250 or Computer Science 31), 82, 105D. Steady conduction: two-sided, two-ended, tapered, and circular cylinders, finite cylinders; surface radiation. Transient conduction: slabs, cylinders, products. Convection: transpiration, laminar pipe flow, film condensation, boundary layers, dimension analysis, working correlation, surface radiation. Two-stream heat exchangers. Elements of thermal design. Letter grading.


133A. Engineering Thermodynamics. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 103, 105A. Applications of thermodynamic principles to engineering processes. Energy conversion systems. Rankine cycle and other cycles, refrigeration, psychrometry, reactive and non-reactive fluid systems. Elements of thermodynamic design. Letter grading.

135. Fundamentals of Nuclear Science and Engineering. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: course 82, Chemistry 20. Review of nuclear physics, radioactivity and decay, and radiation interaction with matter. Nuclear fission and fusion processes and mass defect, chain reactions, criticality, neutron diffusion and multiplication, heat transfer issues, and applications. Introduction to fuel cycles for commercial electric power production, nuclear fuel, and nuclear power reactors. Determination of uranium and thorium abundance; nuclear energy integration; solar and wind generation intermittency and corrosion; microgrids; grid stability; energy storage and electric vehicles-simulation; monitoring; distribution and transmission grids; consumer-centric technologies; sensors, communications, and computing; wireless, wired, and wireline communications for smart grids; grid modeling, stability, and control; frequency and voltage regulation; ancillary services; wide-area situational awareness, phasor measurement; analytical methods and tools for monitoring and control. Concurrently scheduled with course C237. Letter grading.

CM140. Introduction to Biomechanics. (4) Same as Bioengineering CM140.) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 101, 102, and 156A or 156A. Introduction to mechanical functions of human body; skeletal adaptations to optimize load transfer, mobility, and function. Dynamics and kinematics. Fluid mechanics applications. Heat and mass transfer. Power generation. Laboratory simulations and tests. Concurrently scheduled with course CM240. Letter grading.


C150G. Fluid Dynamics of Biological Systems. (4) Lecture, four hours; outside study, eight hours. Requisite: course 103. Mechanics of aquatic locomotion; propulsion, design and performance of aquatic locomotion; hydrodynamics of animal propulsion and swimming; fluid mechanics and fluid dynamics of single-cell organisms; locomotion in launch vehicle technologies. Concurrently scheduled with course C296A. Letter grading.

C150P. Aircraft Propulsion Systems. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 105A, 150A. Thermodynamics of ideal gas mixtures, propulsion systems, design and performance of engine cycle analysis and component performance, component matching, advanced aircraft engine topics. Concurrently scheduled with course C250P. Letter grading.

C150R. Rocket Propulsion Systems. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisites: courses 103, 105A. Rocket propulsion concepts, including chemical rockets (liquid, gas, and solid propellants), hybrid rocket engines, electric (ion, plasma) rockets, nuclear rockets, and solar-powered vehicles. Current issues in launch vehicle technologies. Concurrently scheduled with course C250R. Letter grading.

153A. Engineering Acoustics. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisite: course 154S. Classical preliminary design of aircraft, including weight estimation, performance and stability, and control considerations. Term assignment consists of preliminary design of low-speed aircraft. Letter grading.


154S. Flight Mechanics, Stability, and Control of Aircraft. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 154S. Axioms of Newtonian mechanics, geodesics of characteristics, Hamilton's principle, variational principles; central force motion; kinematics and dynamics of rigid bodies, Euler equations, motion of rotating bodies, oscillatory motion, normal coordinates, orthogonality relations. Letter grading.


157. Basic Mechanical and Aerospace Engineering Laboratory. (4) Laboratory, eight hours; outside study, four hours. Requisites: courses 101, 102, 103, 150A, Electrical Engineering 100. Methods of measurement of basic quantities and performance of basic experiments in fluid mechanics, structures, and thermodynamics. Primary sensors, transducers, recording equipment, signal processing, and data analysis. Letter grading.

157A. Fluid Mechanics and Aerodynamics Laboratory. (4) Laboratory, eight hours; outside study, four hours. Requisites: courses 150A, 150B, and 157 or 157S. Experimental illustration of important physical phenomena in area of fluid mechanics/aerodynamics, as well as hands-on experience with design of experimental programs and use of modern experimental tools.
Mechanical and Aerospace Engineering / 495

1575. Basic Aerospace Engineering Laboratory. (4) Laboratory, eight hours; outside study, four hours. Enforced requisites: courses 102, 103, 105A, Electrical Engineering 100. Recommended: course 15. Measurements of basic physical quantities in fluid mechanics, thermodynamics, and structures. Operation of primary transducers, computer-aided data acquisition, signal processing, and data analysis. Performance of experiments to enhance understanding of basic physical principles and characteristics of structures/systems of relevance to aerospace engineering. Letter grading.

161A. Introduction to Astronautics. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisites: course 102. Recommended: course 82. Spaceflight, including two-body and three-body problem, Kepler laws, and Keplerian orbits. Ground track and talk of common orbits. Orbital and transfer maneuvers, patched cones, perturbation theory, low-thrust trajectories, spacecraft pointing, and spacecraft attitude control. Space mission design, space environment, rendezvous, reentry, and launch. Letter grading.

161B. Introduction to Space Technology. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Recommended preparation: courses 102, 161A. Kinetics, dynamics, and dynamics, including spacecraft power, instruments, communications, structures, materials, thermal control, and attitude/orbit determination and control. Space mission design, spacecraft design considerations. Letter grading.

161C. Spacecraft Design. (4) Lecture, four hours; outside study, eight hours. Enforced requisites: course 161B. Preliminary design and analysis by students of Earth-orbiting or interplanetary space missions and spacecraft. Students work in groups of three or four, with each student responsible primarily for one subsystem and for integration with whole. Letter grading.

161D. Space Technology Hardware Design. (4) Lecture, four hours; discussion, two hours; outside study, four hours. Enforced requisites: course 161B. Design by students of hardware with applications to space technology. Designs are then built by HSSEAS professional machine shop and tested by students. Letter grading.


162D. Mechanical Engineering Design I. (4) Lecture, two hours; laboratory, four hours; outside study, six hours. Enforced requisites: courses 94, 156A (or 183A or M183B), 162A (or 171A). Limited to seniors. First of two mechanical engineering capstone design courses. Lectures on engineering project management, design of mechanical systems, thermal systems, mechanical systems, and mechanical components. Students work in teams to begin their two-term design project. Design guidelines include CAD, FEM analysis, material science, and conceptual design for team project. Letter grading.

162E. Mechanical Engineering Design II. (4) Lecture, two hours; laboratory, four hours; outside study, six hours. Enforced requisites: course 162D. Limited to seniors. Second of two mechanical engineering capstone design courses. Student groups continue design projects begun in 162D. Additional topics include CAD design laboratory, CAD analysis laboratory, and mechatronics laboratory. Design theory, design tools, economics, marketing, manufacturability, quality, intellectual property, manufacturing assembly, design for safety and reliability, and engineering ethics. Students conduct hands-on design, fabrication, and testing. Culuminating project demonstrates competence in team problem solving in both oral and written formats. Letter grading.

166A. Analysis of Flight Structures. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisites: courses 82, 101. Not open to students with credit for course 156A. Introduction to two-dimensional elasticity, stress-strain laws, yield and fatigue; bending of beams; torsion of shafts; warping; torsion of thin-walled sections; shear flow, shear-lag; combined bending torsion of thin-walled, stiffened surfaces used in aerospace vehicles; elements of plate theory; buckling of columns. Letter grading.

166C. Design of Composite Structures. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisites: courses 156A or 166A. History of composites, stress-strain relations for composite materials, bending and extension of symmetric laminates, failure analysis, design examples and design studies, bonding of composite components, nonasymmetric laminating, micromechanics of composites. Letter grading.

M168. Introduction to Finite Element Methods. (4) (Same as Civil Engineering M135C) Lecture, four hours; discussion, one hour; outside study, six hours. Enforced requisites: course 156A or 166A or Civil Engineering 130. Introduction to basic concepts of finite element methods (FEM) and applications to structural and solid mechanics. Direct matrix structural analysis; weighted residual, least squares, and Ritz approximation methods; shape functions; convergence properties; isoparametric formulation of multivariable functions; plasticity; numerical integration. Practical use of FEM software; geometric and analytical modeling; preprocessing and postprocessing techniques; term projects with computers. Letter grading.


172. Control System Design Laboratory. (4) Lecture, four hours; laboratory, four hours; outside study, six hours. Enforced requisites: course 171A or Electrical Engineering 141. Introduction to loop shaping controller design with application to laboratory electromechanical systems. Power spectrum models of noise and disturbances, and performance trade-offs in control system design. Constraints on sensitivity function and complementary sensitivity function imposed by nonminimum phase plants. Letter topics supported by workshop and/or computer-aided design software. Letter grading.

174. Probability and Its Applications to Risk, Reli- ability, and Quality Control. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Required prerequisite: introduction to probability theory; random variables, distributions, functions of random variables, models of failure of components, reliability, redundancy, complex systems, stress-strength models, fault tree analysis, statistical quality control by variables and attributes, acceptance sampling. Letter grading.


181A. Complex Analysis and Integral Transforms. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: course 82. Complex variables, analytic functions, conformal mapping, contour integrals, singularities, residues, Cauchy integrals; Laplace transform: properties, convolution, invariance; Fourier transform: properties, convolution, FFT, applications in dynamics, vibrations, structures, and heat conduction. Letter grading.


M183B. Introduction to Microscale and Nanoscale Manufacturing. (4) (Same as Bioengineering M153, Chemical Engineering M153, and Electrical Engineer- ing M153) Lecture, three hours; laboratory, four hours; outside study, five hours. Enforced requisites: Chemistry 20A, Physics 1A, 1B, 1C, 4AL, 4BL. Introduction to general manufacturing methods, mecha- nisms, constraints, and microfabrication and nanofabrication. Focus on concepts, physics, and instruments of various microfabrication and nanofabrication techniques that have emerged in industry and academia, including various photolithography technologies, physical and chemical deposition methods, and physical and chemical etching methods. Hands-on experience in learning micro-structures and nanostructures in modern cleanroom environment. Letter grading.

C183C. Rapid Prototyping and Manufacturing. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisites: course 183A. Rapid prototyping (RP), solid freeform fabrication, or additive manufacturing has emerged as popular manu- facturing technologies that have accelerated product creation in last two decades. Machine for layered manufacturing builds parts directly from CAD models. This novel manufacturing technology enables building of prototypes in extremely short time. Enforced requisites: course 183A. Rapid prototyping (RP), solid freeform fabrication, or additive manufacturing has emerged as popular manu- facturing technologies that have accelerated product creation in last two decades. Machine for layered manufacturing builds parts directly from CAD models. This novel manufacturing technology enables building of prototypes in extremely short time. Enforced requisites: course 183A. Rapid prototyping (RP), solid freeform fabrication, or additive manufacturing has emerged as popular manu- facturing technologies that have accelerated product creation in last two decades. Machine for layered manufacturing builds parts directly from CAD models. This novel manufacturing technology enables building of prototypes in extremely short time. Enforced requisites: course 183A.
184. Introduction to Geometry Modeling. (4) Lecture, four hours; outside study, six hours. Enforced requisites: courses M20 or Civil Engineering M20 or Computer Science 31. Fundamentals in parametric curve and surface modeling, parameterization functions, control and transformation, algebraic and geometric form of surfaces, analytical properties of curve and surface, hands-on experience with CAD/CAM systems design and implementation. Letter grading.


C187L. Nanoscale Fabrication, Characterization, and Biodetection Laboratory. (4) Lecture, two hours; laboratory, three hours; outside study, seven hours. Multidisciplinary course that introduces laboratory techniques of nanoscale fabrication, characterization, and biodetection. Basic physical, chemical, and biological principles related to these techniques, top-down and bottom-up (self-assembly) nanofabrication, nanocharacterization (AEM, SEM, etc.), and optical and electrochemical biosensors. Students are encouraged to create their own ideas in self-designed experiments. Concurrently scheduled with course C287L. Letter grading.

188. Special Courses in Mechanical and Aerospace Engineering. (2 to 4) Lecture, two to four hours; outside study, four to eight hours. Special topics in mechanical and aerospace engineering for undergraduate students taught on experimental or temporary basis, such as those taught by resident and visiting faculty members. May be repeated once for credit with topic or instructor change. P/NP or letter grading.

194. Research Group Seminars: Mechanical and Aerospace Engineering. (2 to 4) Seminar, two hours. Designed for undergraduate students who are part of research group. Discussion of research methods and current literature in field. Student presentation of progress and research. May be repeated for credit. P/NP or letter grading.

199. Directed Research in Mechanical and Aerospace Engineering. (2 to 8) Tutorial, to be arranged. Limited individual supervision and research or study under supervision of faculty mentor. May be repeated for credit with school approval. Individual contract. Consent of faculty mentor required. May be repeated for credit with change in topic. Open only to mechanical and aerospace engineering students. Letter grading.

Graduate Courses


231B. Radiation Heat Transfer. (4) Lecture, four hours; outside study, eight hours. Requisite: course 105D. Radiative properties and radiative energy transfer. Emphasis on fundamental concepts, including energy levels and electromagnetic waves as well as analytical methods for calculating radiative properties and radiation transfer in absorbing, emitting, and scattering media. Applications cover laser-material interactions in addition to traditional areas such as combustion and thermal insulation. Letter grading.


231G. Microscopic Energy Transport. (4) Lecture, four hours; outside study, eight hours. Requisite: course 105D. Heat carriers (photons, electrons, phonons, molecules) and their energy characteristics, statistical properties of heat carriers, scattering and properties, aspects of thermal transport equations, derivation of classical laws from Boltzmann transport equations, deviation from classical laws at small scale. Letter grading.


233. Nanoscience for Energy Technologies. (4) Lecture, four hours; outside study, eight hours. Introduction to fundamental principles of energy transport, conversion, and storage at nanoscale, and recent development for these energy technologies involving nanophotonics, nanochemistry, nanostructures, solid state, quantum mechanics, electromagnetics, and statistical physics. Topic discussions given for examples that connect technological application, fundamentals, and challenges of the development of nanotechnology. Application of nanotechnology to improve device performance and energy efficiency. Letter grading.

235A. Nuclear Reactor Theory. (4) Lecture, four hours; outside study, eight hours. Underlying physics and mathematics of nuclear reactor (fission) core design. Diffusion theory, reactor kinetics, slowing down and thermalization, multigroup methods, introduction to transport theory. Letter grading.

237. Design and Analysis of Smart Grids. (4) Lecture, four hours; outside study, eight hours. Demand response; transactive/price-based load control; home-area network, smart energy profile; advanced metering infrastructure; renewable energy integration; distribution automation and control; grid ancillary services; market mechanisms; applications of power electronics and control. Letter grading.

dynamics, Langevin dynamics, and kinetic Monte Carlo) and their applications at nanoscale. Developments and applications of dislocation dynamics and statistical mechanics methods in areas of nanostructure and microstructure self-organization, heterogeneous plastic deformation, materials failure phenomena. Presentation of technical applications of these emerging modeling techniques to surfaces and interfaces, grain boundaries, dislocations and defects, surface growth, quantum dots, nanotubes, nanoclusters, thin films (e.g., optical thermal barrier coatings and ultrasonar nanolayer materials), nano-identification, smart (active) materials, nanobending and microbending, and torsion. Letter grading.

259A. Seminar: Advanced Topics in Fluid Mechanics. (4) Seminar; four hours; outside study, eight hours. Recommended for students interested in fluid mechanics with intensive student participation involving assignments in research problems leading to term paper or oral presentation (possible help from guest lecturers). Letter grading.

259B. Seminar: Advanced Topics in Solid Mechanics. (4) Seminar; four hours; outside study, eight hours. Advanced study in various fields of solid mechanics on topics which may vary from term to term. Topics include dynamics, plasticity, and stability of solids. Letter grading.

260. Current Topics in Mechanical Engineering. (2 to 4) Seminar; two to four hours; outside study, four to eight hours. Designed for graduate mechanical and aerospace engineering students. Lectures, discussions, and student presentations and projects in areas of current interest in mechanical engineering. May be repeated for credit. S/U grading.


261B. Computational Mechanics of Solids and Structures. (4) Lecture; four hours; outside study, eight hours. Recommended requisite: course 166C. Constitutive relations for electro-magneto-mechanical materials. Fiber-optic sensor technology. Micro/macromechanical analysis, including classical lamination theory, shear lag theory, concentric cylinder analysis, hexagonal models, and homogenization techniques as they apply to active materials. Active materials design, inch-worm, and bi-morph. Letter grading.

262. Mechanics of Intelligent Material Systems. (4) Lecture; four hours; outside study, eight hours. Recommended requisite: course 166C. Constitutive relations for electro-magneto-mechanical materials. Fiber-optic sensor technology. Micro/macromechanical analysis, including classical lamination theory, shear lag theory, concentric cylinder analysis, hexagonal models, and homogenization techniques as they apply to active materials. Active materials design, inch-worm, and bi-morph. Letter grading.

263A. Kinematics of Robotic Systems. (4) Lecture; four hours; outside study, eight hours. Recommended requisites: courses 155, 171A. Kinematic models of serial robotic manipulators, including spatial descriptions and transformations (Euler angles, Denavit-Hartenberg/DH parameters, equivalent angle vector), frame assembly, and direct kinematics. Inverse and forward kinematics (geometric and algebraic approaches), mechanical design topics. Letter grading.

263B. Dynamics of Robotic Systems. (4) Lecture; four hours; outside study, eight hours. Enforced requisite: course 263A. Dy-namics models of serial and parallel robotic manipulators, including review of spatial descriptions and transformations along with direct and inverse kinematics, linear and angular velocities, Jacobian matrix (velocity and force), velocity propagation method, force propagation method, explicit formulation of Jacobian matrix, manipulator dynamics (Newton/Euler formulation, Lagrangian formulation), trajectory generation, introduction to parallel manipulators. Letter grading.

263C. Control of Robotic Systems. (4) Lecture; four hours; outside study, eight hours. Enforced requisite: course 263B. Sensors, actuators, and control schemes for robotic systems, including computed torque control, linear feedback control, impedance and force feedback control, and advanced control topol archae and adaptive control, hybrid control, nonholonomic systems, vision-based control, and perception.

263D. Advanced Topics in Robotics and Control. (4) Lecture; four hours; outside study, eight hours. Enforced requisite: course 263C. Current and advanced topics in robotics and control, including kinematics, dynamics, control, mechanical design, advanced sensors and actuators, flexible links, manipulability, redundant manipulators, human-robot interaction, teleoperation, haptics. Letter grading.


269D. Aeroelastic Effects in Structures. (4) Lecture; four hours; outside study, eight hours. Requisite: course M269A. Presentation of aeroelasticity from unified viewpoint applicable to flight structures, suspension bridges, and other structures. Derivation of aeroelastic operators and unsteady airloads from governing variational principles. Flowinduced instability and response of structural systems. Letter grading.


M270C. Optimal Control. (4) Lecture, four hours; outside study, eight hours. Methods for identification of dynamical systems from input/output data, with emphasis on identification of discrete-time (digital) models. Topics include the singular-value decomposition, conversion to continuous-time models. Models identified include transfer functions and state-space models. Discussion of applications in mechanical and aerospace engineering, including flexible structures, microelectromechanical systems (MEMS) devices, and acoustic ducts. Letter grading.


279. Dynamics and Control of Biological Oscilla-tions. (4) Lecture; four hours; outside study, eight hours. Requisites: courses 107, 270A. Analysis and design of dynamical mechanisms underlying biological control systems that generate coordinated oscillations. Topics include neuronal information processing, imum variance estimator (Kalman filter) with applications. Concurrently scheduled with course C175A. Letter grading.

271B. Stochastic Estimation. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 271A. Linear estimation theory, orthogonal projection lemma, Bayesian filtering theory, conditional mean and risk estimators. Letter grading.


271D. Seminar: Special Topics in Dynamic Sys-tems Control. (4) Seminar; four hours; outside study, eight hours. Seminar on current research topics in dynamic systems modeling, control, and applications. Topics selected from process control, differential games, nonlinear estimation, adaptive filtering, industrial and aerospace applications, etc. Letter grading.


275A. System Identification. (4) Lecture; four hours; outside study, eight hours. Methods for identification of dynamical systems from input/output data, with emphasis on identification of discrete-time (digital) models. Topics include the singular-value decomposition, conversion to continuous-time models. Models identified include transfer functions and state-space models. Discussion of applications in mechanical and aerospace engineering, including flexible structures, microelectromechanical systems (MEMS) devices, and acoustic ducts. Letter grading.

276E. Dynamic Programming. (4) Same as Electrical Engineering M231T. Lecture; four hours; outside study, eight hours. Recommended requisite: Electrical Engineering 232A or 236A or 236B. Introduction to mathematical analysis of sequential decision processes. Finite horizon model in both deterministic and stochastic cases. Finite-state infinite horizon model. Methods of solution. Examples from inventory theory, finance, optimal control and estimation, Markov decision processes, combinatorial optimization, communications. Letter grading.


278. Dynamics and Control of Biological Oscilla-tions. (4) Lecture; four hours; outside study, eight hours. Requisites: courses 107, M270A. Analysis and design of dynamical mechanisms underlying biological control systems that generate coordinated oscillations. Topics include neuronal information pro-
ceasing through action potentials (neuromuscular, central pattern generator, coupled nonlinear oscillators, optimal gaits (periodic motion) for animal locomotion, and entrainment to natural oscillations via feedback control. Letter grading.

M280B. Micro-and Nanostructural Systems (MEMS) Fabrication. (4) (Same as Bioengineering M280B and Electrical Engineering M250B.) Lecture, three hours; discussion, one hour; outside study, eight hours. Enrolled course: M182B. Advanced discussion concerning culture patterns used to construct MEMS. Coverage of many lithographic, deposition, and etching processes, as well as their combination in processes forming various materials issues, such as chemical resistance, corrosion, mechanical properties, and residual/intrinsic stress. Letter grading.

281. Microsciences. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 102, 103, 105D. Fundamental issues of being in microscopic world and mechanical engineering of microscale devices. Topics include scale issues, surface tension, superhydrophobic surfaces and applications, and electrowetting and applications. Letter grading.

M282. Microelectromechanical Systems (MEMS) Device Physics and Design. (4) (Same as Bioengineering M222 and Electrical Engineering M252.) Lecture, four hours; outside study, eight hours. Introduction to MEMS design and fabrication processes, sensing and actuation mechanisms, microsensors, and microactuators. Designing MEMS to be produced with both foundry and nonfoundry processes. Computer-aided design for MEMS. Design project required. Letter grading.


285. Optical Engineering. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 282, 103, 105A, 105D. Introduction to fundamental physical phenomena occurring at interfaces and applications of their knowledge to engineering problems. Fundamental concepts of interfacial phenomena, including surface tension, surfactants, interfacial thermodynamics, interfacial forces, interfacial hydrodynamics, and interfacial stability. Presentation of various applications, including wetting, change of phase (boiling and condensation), forms and emulsions, microelectromechanical systems, and biological systems. Letter grading.


M287A. Mechanical Design for Power Transmission. (4) (Formerly numbered 296C.) Lecture, four hours; outside study, eight hours. Requisite: course 156A or 166A. Material selection in mechanical design. Load and stress analysis. Deflection and stiffness. Failure due to static loading. Fatigue failure. Design for safety factors and reliability. Applications of failure prevention in design of power transmission shafting. Design project involving computer-aided design (CAD) and finite element methods (FEM) modeling. Concurrently scheduled with course C156B. Letter grading.

296B. High-Temperature Mechanical Design. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 156A or 166A. Material selection in mechanical design. Load and stress analysis. Deflection and stiffness. Failure due to static loading. Fatigue failure. Design for safety factors and reliability. Applications of failure prevention in design of power transmission shafting. Design project involving computer-aided design (CAD) and finite element methods (FEM) modeling. Concurrently scheduled with course C156B. Letter grading.

C297A. Rapid Prototyping and Manufacturing. (4) Lecture, four hours; laboratory, two hours; outside study, six hours. Recommended requisites: level of knowledge in manufacturing equivalent to course 183A and CAD capability. Rapid Prototyping (RP), the process of converting computer models to physical objects has emerged as popular manufacturing technology to accelerate product creation in last two decades. Machine for layered manufacturing builds parts directly from CAD models. This rapid manufacturing technology enables building of parts that have traditionally been impossible to fabricate because of their complex shapes or of variety in materials, in analogy to simple flexible, moving images. Rapid Prototyping is also called desktop manufacturing, with actual three-dimensional solid objects instead of mere two-dimensional images. Methodology of rapid Prototyping has also been extended into micro- and nanoscale fabrication to produce three-dimensional functional miniature components. Concurrently scheduled with course C183C. Letter grading.

M297B. Laser Microfabrication. (4) (Formerly numbered 297A.) Same as Materials Science M297B.) Lecture, four hours; outside study, eight hours. Enrolled course: course 183A. Thermodynamics, principles of engineering. Phase equilibria and transitions, interfaces. Applications in casting/solidification, welding, consolidation, chemical vapor deposition, infiltration, composites. Letter grading.

M297C. Composites Manufacturing. (4) (Formerly numbered 297D.) Same as Materials Science M297C.) Lecture, four hours; outside study, eight hours. Requisites: course 186D, Materials Science 151. Matrix materials, fibers, fiber preforms, elements of processing, autoclave/compression molding, filament winding, pultrusion, resin transfer molding, automated material removal and finishing, metal and ceramic matrix composites, quality assurance. Letter grading.

298. Seminar: Engineering. (2 to 4) Seminar, to be arranged. Limited to graduate mechanical and aerospace engineering students. Seminars may be organized in advanced technical fields. If appropriate, field trips may be arranged. May be repeated with topic change. Letter grading.

M299. Seminar: Systems, Dynamics, and Control Topics. (2) (Same as Chemical Engineering M297 and Electrical Engineering M248S.) Seminar, two hours; outside study, six hours. Limited to graduate engineering students. Presentations of research topics by leading academic researchers from fields of systems, dynamics, and control. Students who work in these fields present their papers and results. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Teaching Assistant Training Seminar. (2) Seminar, two hours; outside study, four hours. Preparation: appointment as teaching assistant in depart- ment of Mechanical and Aerospace Engineering. Petition forms to request enrollment may be obtained from assistant dean, Graduate Studies. Supervised investigation of advanced technical problems. S/U grading.

596. Directed Individual or Tutorial Studies. (2 to 8) Tutorial, to be arranged. Limited to graduate engineering students. Petition forms to request enrollment may be obtained from assistant dean, Graduate Studies. Supervised investigation of advanced technical problems. S/U grading.

597A. Preparation for MS Comprehensive Exam- inations. (1) Tutorial, to be arranged. Limited to graduate mechanical and aerospace engineering students. Reading and preparation for MS comprehensive examination. S/U grading.
Medicine

David Geffen School of Medicine
37-120 Center for Health Sciences
Box 951736
Los Angeles, CA 90095-1736
310-825-6058
http://medschool.ucla.edu/education

Alan M. Fogelman, MD (Castera Professor of Cardiology), Executive Chair
Jose Escarce, MD, PhD, Executive Vice Chair, Academic Affairs
Robert K. Oye, MD, Executive Vice Chair, Clinical Services
Dennis J. Slamon, MD (Bower Professor of Medical Oncology), Executive Vice Chair, Research

Scope and Objectives

The principal goal of the Department of Medicine is to educate students in the expert diagnosis and compassionate management of human illness. Building on the biochemical, physiological, and behavioral foundations of the preclinical experience, students are taught information acquisition through history taking, physical examination, and laboratory evaluation; information synthesis through achieving a differential diagnosis and evaluative plan; and medical decision making for continued evaluation and therapy. Students are encouraged and guided in developing a caring physician/patient relationship.

Instruction in the department is provided in all four years of medical school, with the third and fourth years constituting a continuum of clinical experience. Students become integrated into a ward team and have significant ambulatory care experiences. They apply and extend their clinical skills, medical knowledge, and judgment in the care of patients assigned to them under the immediate supervision of house officers and attending staff.

The department offers a broad range of advanced clinical clerkships in general and subspecialty ambulatory and hospital-based internal medicine at all the major affiliated centers. For more details on the Department of Medicine and a listing of the courses offered, see the department website.

Medicine

Upper-Division Courses

M160A. Health Outreach and Education for At-Risk Populations. (Same as Public Health M160A.) Lecture, four hours. Prerequisites: Admissions, S/U grading. First in series of courses to explore prevention of disease in at-risk populations. (2 to 16)

M160B. Health Outreach and Education for At-Risk Populations. (Same as Public Health M160B.) Lecture, two hours; discussion, two hours. Prerequisite: course M160A. Second in series of courses to explore prevention of disease in at-risk populations. Clinical services and referrals for disadvantaged, and effects of low socioeconomic status on academic achievement, career, and family. Lectures by faculty and practitioners, with field visits. P/NP or letter grading.

M160B. Health Outreach and Education for At-Risk Populations. (Same as Public Health M160B.) Lecture, two hours; discussion, two hours. Prerequisite: course M160A. Second in series of courses to explore prevention of disease in at-risk populations. Clinical services and referrals for disadvantaged, and effects of low socioeconomic status on academic achievement, career, and family. Lectures by faculty and practitioners, discussion groups, and field activities including health education. P/NP or letter grading.

M160C. Health Outreach and Education to At-Risk Populations. (Same as Public Health M160C.) Lecture, two hours; discussion, two hours. Prerequisite: course M160A. Second in series of courses to explore prevention of disease in at-risk populations. Clinical services and referrals for disadvantaged, and effects of low socioeconomic status on academic achievement, career, and family. Lectures by faculty and practitioners, discussion groups, and field activities including health education. P/NP or letter grading.

M180. Special Topics in Medicine. (4) Lecture, four hours; discussion, one hour. Medical topics of special interest to undergraduate students. Specific subjects may vary each term depending on particular interest of instructors and students. Topics may include East/West medicine and global medicine. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M199. Directed Research in Medicine. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses


M256. Interdisciplinary Response to Infectious Disease Emergencies: Medicine Perspective. (4) (Same as Community Health Sciences M256, Nursing M298, and Oral Biology M256.) Lecture, three hours; discussion, one hour. Designed to instill in professional students ideas of common emergency health problems and coordinated response, with specific attention to bioterrorism. Examination of tools to help students prevent, detect, and intervene in infectious disease emergencies. Interdisciplinary sessions also attended by students in Schools of Dentistry, Nursing, and Public Health during weeks two through five. Letter grading.

M260A-M260B. Methodology in Clinical Research I, IL. (4-4) (Same as Biostatistics M260A-M260B.) Lecture, four hours. Recommended preparation: MD, PhD, or dental degree. Prerequisites: Biostatistics M170A, 265A. Course M260A is requisite to M260B. Presentation of principles and practices of major disciplines underlying clinical research methodology, such as biostatistics, epidemiology, pharmacokinetics. S/U or letter grading.

M260C. Methodology in Clinical Research III. (4) (Same as Biostatistics M260C.) Discussion, four hours. Recommended preparation: MD, PhD, or dental degree. Presentation of principles and practices of major disciplines underlying clinical research methodology, such as biostatistics, epidemiology, pharmacokinetics. S/U or letter grading.

M261. Responsible Conduct of Research Involving Humans. (2) (Same as Biostatistics M261.) Lecture, two hours; discussion, two hours. Preparation: completion of one basic course in protection of human research subjects through Collaborative Institutional Training Initiative. Discussion of current issues in responsible conduct of research, including reporting of research, basis for authorship, issues in genetic research, principles and practice of research on humans, conflicts of interest, Institutional Review Board (IRB), and related topics. S/U or letter grading.

M263. Clinical Pharmacology. (2) (Same as Biostatistics M263 and Psychiatry M263.) Lecture, two hours. Preparation: completion of professional health sciences degree (MD, DDS, DNSc, or PhD). Overview of principles of clinical pharmacology, especially as they relate to clinical and translational medicine and to advances in contemporary medicine such as targeting, gene therapy, and genomics. Letter grading.

M270C. Advanced Modeling Methodology for Dynamic Biomedical Systems. (4) (Same as Bioengineering M296A and Computer Science M296A.) Lecture, four hours; outside study, eight hours. Prerequisite: Electrical Engineering 141 or 142 or Mathematics 115A or Mechanical and Aerospace Engineering 171A. Development of dynamic systems modeling methodology for physiological, biomedical, pharmaceutical, chemical, and related systems. Control system, multiparameter, noncompartmental, compound/output models, linear and nonlinear. Emphasis on model applications, limitations, and relevance in biomedical sciences and other limited data environments. Problem solving in PC laboratory. Letter grading.

M270D. Optimal Parameter Estimation and Experiment Design for Biomedical Systems. (4) (Same as Bioengineering M296B, Biostatistics M270, and Computer Science M296B.) Lecture, four hours; outside study, eight hours. Prerequisite: course M270C or Bioengineering CM286 or Biostatistics 220. Estimation methodology and model parameter estimation algorithms for fitting dynamic system models to biomedica data. Model discrimination methods. Theory and techniques for designing optimal experiments for developing and quantifying models, with special focus on optimal sampling schedule design for kinetic models. Exploration of PC software for model building and conducting experiment design experiments applied in physiology and pharmacology. Letter grading.

M270E. Advanced Topics and Research in Biomedical Systems Modeling and Computing. (4) (Same as Bioengineering M296C and Computer Science M296C.) Lecture, four hours; outside study, eight hours. Prerequisite: course M270D. Research techniques and experience on special topics involving models, modeling methods, and model/computing in biomedical and medical sciences and related systems. Control system, multiparameter, noncompartmental, and input/output models, linear and nonlinear. Emphasis on model applications, limitations, and relevance in biomedical sciences and other limited data environments. Problem solving in PC laboratory. Letter grading.

Microbiology, Immunology, and Molecular Genetics
College of Letters and Science and David Geffen School of Medicine

1602 Molecular Sciences
Box 951489
Los Angeles, CA 90095-1489
310-825-8482
http://www.mimg.ucla.edu

Adjunct Associate Professor
Imke Schroeder, PhD

Adjunct Assistant Professor
Erin R. Sanders, PhD

Scope and Objectives
Microbiology at UCLA is a diverse science that includes bacteriology, virology, immunology, genetics, molecular biology, and the study of single cells. The science has its roots in the fundamental human needs of health, nutrition, and environmental control, and it provides students with opportunities for study in the basic biological fields of genetics and cellular and molecular biology.

Undergraduate students majoring in the Department of Microbiology, Immunology, and Molecular Genetics prepare for careers in biomedical research, medicine, dentistry, or other health professions, biotechnology and genetic engineering, industrial microbiology, agricultural or environmental sciences, public health, and law or bioethics, among others. The courses presented by the department lead to a Bachelor of Science degree and depend heavily on preparation in the biological sciences, chemistry, physics, and mathematics.

The graduate program emphasizes the areas of molecular genetics, cell biology, immunology, cell and virus structure and morphogenesis, animal virology, general bacteriology and physiology, host/parasite relationships, medical microbiology, microbial genetics, microbial pathogenesis, and recombinant DNA research. Students are prepared for research careers in all of these fields. The objective of the department is to provide breadth in microbiology, immunology, and molecular genetics at the undergraduate level and depth and training in independent study and research for graduate students.

Undergraduate Study
Microbiology, Immunology, and Molecular Genetics BS

Microbiology, Immunology, and Molecular Genetics Premajor

While students are completing the preparation courses for the major, they are classified as Microbiology, Immunology, and Molecular Genetics premajors.

Preparation for the Major
Life Sciences Core Curriculum

Required: Chemistry and Biochemistry 1A, 1B, 1BL, 1C, and 1D, or 20A, 20B, 20L, 30A, 30AL, and 30B; Mathematics 3A, 3B, 3C, and Statistics 13, or 31A, 31B, 32A, and Statistics 13, or Life Sciences 30A, 30B, and 30AL; and 1 unit of 100A, Chemistry and Biochemistry 103A, or 103BL or (b) 109AL and 109BL, (c) two focus elective courses selected from Chemistry and Biochemistry 133, Microbiology, Immunology, and Molecular Genetics 101, 102, 103, 104, and 105, 106, 107, 122, CM156, 158, 168, CM256, Molecular, Cell, and Developmental Biology 138, 165A, 165B, 165C, and (d) one general elective course selected from any course under item 3 above, Bioengineering 100, CM145, CM178, Biostatistics 100A, Chemistry and Biochemistry 103, 110A, M117, 136, C140, 153B, 153C, 153L, 154, 156, CM160A, C161A, 171, 172, C179, C181, Computer Science CM121, CM122, CM124, Ecol- ogy and Evolutionary Biology 121, C135, 137, 162, Epidemiology 100, Human Genetics C144, Microbiology, Immunology, and Molecular Genetics C122, 174, 191H, 198C, 199 (may be taken once), Molecular, Cell, and Developmental Biology 100, 104AL, 138, M140, C141, 143, 144, C150, 156A, 168, 172, M175A, M175B, M175C, 187AL, Neuroscience M101A, M101B, M101C, Physiological Science CM103, 121, 124, 125, 128, Statistics 100A, 100B. No more than 4 units of course 199 or a combination of 198C and 199 may be applied toward the general electives under Plan I.
Plan II—Advanced Independent Research

Required: Twelve courses as follows: (1) five foundation courses: Chemistry and Biochemistry 153A, 153B, Microbiology, Immunology, and Molecular Genetics 132, Life Sciences 107, Microbiology, Immunology, and Molecular Genetics 101, 185A, (2) Microbiology, Immunology, and Molecular Genetics 196A, 196B or Molecular, Cell, and Developmental Biology 196A, 196B, (3) Microbiology, Immunology, and Molecular Genetics 180A, 180B or Molecular, Cell, and Developmental Biology 180A, 180B, (4) two focus elective courses selected from Chemistry and Biochemistry 153L, Microbiology, Immunology, and Molecular Genetics 102, 105, 106, 107, 132, CM156, 158, 168, CM256, Molecular, Cell, and Developmental Biology 138, 165A, and (5) one general elective course selected from any course under item 3 above, Bioengineering 100, CM145, CM178, Biostatistics 100A, Chemistry and Biochemistry 103, 110A, M117, 118, C140, 153B, 153C, 156, CM160A, C161A, 171, 172, C179, C181, Computer Science CM121, CM122, CM124, Ecology and Evolutionary Biology 121, C135, 137, 162, Epidemiology 100, Human Genetics C144, Microbiology, Immunology, and Molecular Genetics 103AL, 103BL, 109AL, 109BL, C122, 174, 191H, 198C, 199, Molecular, Cell, and Developmental Biology 100, 104AL, 138, M140, C141, 143, 144, C150, 165A, 168, 172, M175A, M175B, M175C, 187AL, Neuroscience M101A, M101B, M101C, Physiological Science CM103, 121, 124, 125, 128, Statistics 100A, 100B.

No more than 4 units of course 198C or 199 may be applied toward the general electives under Plan II.

Plan II requires submission and approval of an admissions application. Detailed information may be obtained at the Student Affairs Office, 1602B Molecular Sciences.

Each major course must be taken for a letter grade of C– or better, and students must have a minimum overall grade-point average of 2.0 or better in the major. Students receiving a grade of D or below in two major courses, or in any course selected from any course under item 3 above, Bioengineering 100, CM145, CM178, Biostatistics 100A, Chemistry and Biochemistry 103, 110A, M117, 118, C140, 153B, 153C, 156, CM160A, C161A, 171, 172, C179, C181, Computer Science CM121, CM122, CM124, Ecology and Evolutionary Biology 121, C135, 137, 162, Epidemiology 100, Human Genetics C144, Microbiology, Immunology, and Molecular Genetics 103AL, 103BL, 109AL, 109BL, C122, 174, 191H, 198C, 199, Molecular, Cell, and Developmental Biology 100, 104AL, 138, M140, C141, 143, 144, C150, 165A, 168, 172, M175A, M175B, M175C, 187AL, Neuroscience M101A, M101B, M101C, Physiological Science CM103, 121, 124, 125, 128, Statistics 100A, 100B.

Honors Program

Overall grade-point averages of 3.2 and 3.5 in the preparation for the major and major respectively are required for applied for departmental honors. In addition students must have junior standing and the sponsorship of a faculty adviser from the department. The core of the program consists of Microbiology, Immunology, and Molecular Genetics 198A, 198B, and 198C research, culminating in a thesis. If the thesis is accepted by the honors committee and students complete all major requirements with a GPA of at least 3.5, they are awarded the bachelor’s degree with departmental honors. The department also offers an honors seminar course each winter quarter that is required for the honors program. For further information, contact the Student Affairs Office, 1602B Molecular Sciences.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduation Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Microbiology, Immunology, and Molecular Genetics offers Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Microbiology, Immunology, and Molecular Genetics. Applicants interested in studying with faculty in the department are encouraged to apply to an appropriate home area in Graduate Programs in Bioscience.

Microbiology, Immunology, and Molecular Genetics

Lower-Division Courses


6. Microbiology for Nonmajors. (4) Lecture, four hours. Not open for credit to students with credit for course 101. Designed for nonscience students; introduction to biology of microorganisms (bacteria, viruses, protozoa, algae, fungi), significance of model systems for understanding fundamental cellular processes, and their role in human affairs. P/NP or letter grading.

10. Medical Microbiology for Nursing Students. (4) Lecture, three hours; discussion, one hour. Requisite: Life Sciences 30A or 30B or Mathematics 3A or 31A. Limited to Nursing majors. Introduction to biology of microbial pathogens, their role in development of human immune response, and presentation of symptoms and diseases caused by microbial infections. Letter grading.

15. Nanoscale Microscopy Laboratory Lecture, 26 hours; laboratory, 14 hours. Recommended requisites: high school biology, chemistry, and physics. Designed as one-week summer course for high school students. Explorative introduction to three key microscopy techniques for nanoscale research: fluorescence microscopy, scanning probe microscopy, and electron microscopy. Nanoscience is umbrella term that encompasses one diverse interdisciplinary branch of modern science research, including molecular sciences, biotechnology, material science, chemistry, biochemistry, and various fields of engineering. Offered in summer only. P/NP grading.

Upper-Division Courses

100L. Microbiology Laboratory for Professional Schools. (5) Lecture, two hours; laboratory, three hours. Requisites: Life Sciences 3, 4, with grades of C– or better. Recommended corequisite: course 101. Limited to nonmajors. Experimental techniques of microbiology, with emphasis on cultivation and characterization of bacteria. Laboratory exercises include light microscopy, quantitative techniques, and identification methods. Students learn to work effectively in groups to perform experiments, record observations, and analyze results. Letter grading.


102. Introductory Virology. (4) Lecture, three hours; discussion, one hour. Requisite: Life Sciences 3 with grade of C– or better. Biological properties of bacterial and animal viruses, replication, methods of detection, interactions with host cells and multicellular hosts. Letter grading.

103AL. Research Immersion Laboratory in Virology. (5) Lecture, two and one half hours; laboratory, eight hours. Requisites: course 101, Life Sciences 3, 4, 23L. Course 103AL is enforced requisite to 103BL. Limited to Microbiology, Immunology, and Molecular Genetics and Molecular, Cell, and Developmental Biology majors. Research-oriented laboratory experience designed to promote mastery of viral and bacterial viruses (phages). Working in teams, students conduct research projects that incorporate techniques in microbiology, virology, and molecular biology and involve use of bioinformatics tools and computational analysis software. Emphasis on reading and understanding scientific literature as well as presenting critical thinking skills such as ability to evaluate hypotheses or experimentally address scientific questions. Critical aspects of research process, including record keeping, ethics, laboratory safety and citizenship, mechanics of scientific writing, and project responsibilities and ownership. Letter grading.

103BL. Advanced Research Analysis in Virology. (4) Laboratory, six hours. Enforced requisites: course 103AL, Statistics 13. Limited to Microbiology, Immunology, and Molecular Genetics premajors and majors. Designed to provide students with autodirected discovery-based research experience in life sciences. Investigation to be primarily computational in nature whereby students use bioinformatics or mathematical modeling software to interpret, expand, or refine datasets. Use of graphics software to prepare figures and illustrations for presentations, posters, reports, and websites (database entries). Research accomplishment discussed in weekly seminar-style meetings in which student groups create PowerPoint slides and formally present results to class. Production of team poster and final report describing entire research project required. Letter grading.

105. Biological Microscopy. (4) Lecture, four hours; laboratory, three hours (five weeks only). Requisite or corequisite: Physics 1C or 6C. Introduction to modern microscopy and electron microscopy laboratory modules. P/NP or letter grading.


109AL. Research Immersion Laboratory in Microbiology. (5) Lecture, three hours; laboratory, eight hours. Requisites: course 101, Life Sciences 3, 4, 23L. Course 109AL is enforced requisite to 109BL. Limited to Microbiology, Immunology, and Molecular Genetics premajors and majors and Molecular, Cell, and Developmental Biology majors. Research-oriented laboratory experience designed to promote mastery of novel microorganisms. Working in teams, students conduct research projects that incorporate techniques in microbiology and molecular biology and
involve use of bioinformatics tools and phylogenetic software for data analysis. Emphasis on reading and understanding scientific literature as well as improving critical thinking skills such as the ability to create and evaluate hypotheses or experimentally address scientific questions. Focus on robust aspects of research process, including record keeping, ethics, laboratory safety and citizenry, mechanics of scientific writing, and project responsibilities and ownership. Letter grading.

109AL. Advanced Research Analysis in Microbiology. (4) Laboratory, six hours. Enforced requisites: course 109AL, Statistics 13. Limited to Microbiology, Immunology, and Molecular Genetics premajors and majors. Designed to focus students upon discovery of research experience in life sciences. Investigation to be primarily computational in nature whereby students use bioinformatics or mathematical modeling software to interpret, expand, or refine data sets. Use of graphics software to prepare figures and project required. Letter grading.

C122. Mouse Molecular Genetics. (2) Formerly numbered CM122.) Seminar, two hours. Enforced requisite: Life Sciences 4. Designed for students doing research with mice. During past 25 years, molecular genetics and computational scope of mouse genetics, and today mouse is primary experimental model in virtually all fields of biology and biomedicine. Seminar forum for in-depth discussion of tools and technologies of mouse genetics and their application to functional genomics, complex traits, stem cell biology, developmental biology, epigenetics, and genetic dissection of disease. Concurrently scheduled with course C222. P/NP or letter grading.

123. Advanced Annotation and Comparative Genomics. (4) Lecture, two and one half hours; computer laboratory, six hours. Requisite: course 103AL or Molecular, Cell, and Developmental Biology 18AL with grade of B+ or better. Participation in discovery-based research experience, working as research team to analyze microbial genomes using bioinformatics techniques involving variety of online databases. Investigation of cellular pathways and structures as means to discover novel genes and unusual variations in classical systems. Results of high-quality annotation and publication of peer-reviewed science journal. Part of DOE Joint Genome Institute Undergraduate Research in Microbial Genome Annotation education program. Offered in summer only. Letter grading.


C134. Ethics and Biomedical Research. (2) Seminar, two hours. Designed for graduate students who have credit for life sciences or biomedical individual studies 199 course. Responsibilities and ethical conduct of investigators in research, data management, mentorship, grant writing, and publications. Responsibilities to peers, sponsoring institutions, and society. Conflicts of interest, disclosure, animal subject welfare, human subject protection, and areas in which investigation poses risk and certain societal values and conflicts. Concurrently scheduled with course C234. P/NP grading.

CM156. Human Genetics and Genomics. (8) Same as Molecular, Cell, and Developmental Biology C156.) Lecture, three hours; discussion, two hours. Requisites: Life Sciences 3, 4, 23L. Application of genetic principles in human populations, with emphasis on genetics, family studies, positional cloning, Mendelian and complex diseases, cancer genetics, clinical models, cytotogenetics, pharmacogenetics, population genetics, and genetic counseling. Lectures and readings in literature, on current focus on subcellular aspects of research laboratories, and then genetic methods appropriate to answer such questions. Concurrently scheduled with course CM256. Letter grading.

158. Microbial Genomics. (4) Lecture, three hours; discussion, one hour. Requisites: course 101, Chemistry 153A. Evolution, biodiversity, and sequencing of genomes; bacterial and viral genomes; bioinformatics; gene knockouts; genomics of antibiotic resistance; protein functions. Exploration of antibiotic resistance and related departments who discuss key papers with focus on their areas of expertise. Letter grading.

168. Molecular Parasitology. (4) Lecture, three hours; discussion, one hour. Requisites: Life Sciences 3, 4, 180A. Survey of parasitic protozoa not only as parasites that interact with host, but also as model systems for analysis of basic biological phenomena such as gene regulation, molecular development, cell-cell interactions, molecular evolution, and novel biotechnological pathways. Letter grading.

174. Advanced Topics in Molecular Parasitology. (2) Lecture, two hours. Requisites: course 158, Life Sciences 2. Exploration of recent advances in molecular biology of parasites and host-parasite relationship. Specific topics include parasite development, antigenic variation in trypanosomes, RNA editing, prospecting for aneurysms. Letter grading.

180A. Scientific Analysis and Communication I. (2) Seminar, two hours. Enforced corequisite: course 196A. Students read and discuss scientific articles and give presentations, introducing research using primary literatures and current articles. Specific topics related to research process, including record keeping, ethics, laboratory safety and citizenry, mechanics of scientific writing, diverse approaches to research, and project responsibilities and ownership. Acquisition of in-depth and broad knowledge about student research projects, improvement of oral and written communication skills, and full appreciation of process of doing good science and becoming skilled researchers. Letter grading.

180B. Scientific Analysis and Communication II. (2) Seminar, two hours. Enforced requisites: course 196A, course 196B. Students give presentations similar to laboratory meeting or research symposium talk in which investigators discuss project goals, methodological approaches, results, and conclusions. How to write research papers as well as prepare and present scientific posters. Production of deliverables that demonstrate research achievements and creation of sense of pride for work accomplished as skilled researchers. Letter grading.

185A. Immunology. (5) Lecture, three hours; discussion, nine hours. Enforced requisites: Chemistry 153A, Life Sciences 3, 4, 23L. Not open for credit to course 261. Introduction to experimental immunobiology and immunochrometry; cellular and molecular aspects of humoral and cellular immune reactions. Letter grading.

188A. Special Courses in Microbiology, Immunology, and Molecular Genetics. (4) Seminar, four hours. Enforced requisites: Life Sciences 3, 4, Departmentally sponsored experimental or technical courses, such as those taught by visiting faculty members. May be repeated for credit. Letter grading.

188B. Special Courses in Microbiology, Immunology, and Molecular Genetics. (2) Seminar, two hours. Enforced requisites: Life Sciences 3, 4. Departmentally sponsored experimental or technical courses, such as those taught by visiting faculty members. May be repeated for credit. Letter grading.

191H. Honors Research Seminars: Microbiology, Immunology, and Molecular Genetics. (2) Seminar, two hours. Requisites: corequisite or prerequisite: course 191 or 191B or 191C. Limited to senior microbiology, immunology, and molecular genetics honors program students. Students research literature, with focus on thesis topics/areas that students are working on as part of departmental honors requirements. One-half presentation of student’s research and current literature associated with it. May be repeated for credit. Letter grading.

192. Undergraduate Practicum in Microbiology, Immunology, and Molecular Genetics. (2) Seminar, six hours. Limited to junior/senior departmental majors. Training and supervision of advanced undergraduate students. Students assist in preparation of materials and development of innovative programs under guidance of faculty members in small course settings. Consult Student Affairs Office for further information. May not be applied toward course requirements for departmental majors. May be repeated for credit. P/NP or letter grading.

194A. Research Group Seminars: Microbiology, Immunology, and Molecular Genetics. (1) Seminar, one hour. Limited to undergraduate students. Discussion of research methods and current literature in field of research of faculty members or sub-projects. May be repeated for credit. P/NP grading.

194B. Research Group Seminars: UC LEADS and NIH/MARC. (2) Seminar, two hours. Limited to students in UC LEADS and NIH/MARC programs. Analysis and critique of research in biomedical sciences disciplines, using skills necessary for effective oral communication and effective use of software such as PowerPoint for oral presentations. May be repeated for credit. P/NP grading.

196A. Research Apprenticeship I in Microbiology, Immunology, and Molecular Genetics. (4) Tutorial, 12 hours. Enforced requisites: Life Sciences 3, 4, 23L, 3.0 premajor and/or major grade-point average, and at least one term of prior experience in same laboratory in which 196A research is to be conducted. Enforced corequisite: course 196A. Course 196A is enforced prerequisite to 196B. Designed for undergraduate students who are interested in pursuing inquiry-based and hypothesis-driven research experience in laboratory of departmental faculty mentor. Guided research course to be taken in conjunction with course 196A, followed by continuation research course 196B. Technical aspects vary depending on specific laboratory; however, all students learn how to apply scientific method: propose hypothesis, identify experiments to address hypothesis, perform experiments, and analyze results. How to record information from experimental activities into laboratory notebooks and to write research proposals. Letter grading.

196B. Research Apprenticeship II in Microbiology, Immunology, and Molecular Genetics. (4) Tutorial, 12 hours. Enforced requisite: course 196A. Enforced corequisite: course 196B. Expansion of scope, including independent inquiry. Focus on student independence in research to be performed in same laboratory as course 196A to facilitate learning and implementation of goals stated previously. Technical aspects vary depending on specific laboratory; however, all students use scientific method learned in course 196A and continue same experimental scope proposed, but with additional degree of independence in technical and intellectual aspects of the research. Letter grading.

197. Individual Studies in Microbiology, Immunology, and Molecular Genetics. (2 to 4) Tutorial, four hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student and reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Microbiology, Immunology, and Molecular Genetics / 503
Graduate Courses


M229. Molecular Mechanisms of Host/Pathogen Interaction. (4) (Same as Pathology M229.) Lecture, two hours; discussion, two hours. Enforced requisites: Molecular Biology 254A through 254D. Molecular mechanisms of microbial interactions with eukaryotic host cells that result in disease or pathogen survival. Topics include pathogenesis of common viruses, bacteria, fungi, and parasites, basis of toxin-mediated cellular damage, and immune suppression of microbial tissue damage. Letter grading.

C234. Ethics and Accountability in Biomedical Research. (2) Seminar, two hours. Designed for graduate students and undergraduates who have credit for life sciences or biomedical individual studies 199 course. Responsibilities and ethical conduct of investigators in research, data management, mentorship, grant applications, and publications. Responsibilities to peers, sponsoring institutions, and society. Conflicts of interest, animal welfare, human subject protection, and areas in which investigational goals and certain societal values may conflict. Concurrently scheduled with course C134. S/U grading.

CM256. Human Genetics and Genomics. (5) (Same as Molecular, Cell, and Developmental Biology CM256.) Lecture, three hours; discussion, two hours. Requisites: Life Sciences 3, 4, 23L. Application of genetic principles in human populations, with emphasis on genomics, family studies, positional cloning, Mendelian and common diseases, cancer genetics, animal models, cytogenetics, pharmacogenomics, population genetics, and genetic counseling. Lectures and readings in literature, with focus on current questions in fields of medical and human genetics and methodologies appropriate to answer such questions. Concurrently scheduled with course CM156. Independent research project required of graduate students. Letter grading.

262A-262B-262C. Seminars: Current Topics in Immunobiology of Cancer. (2-2-2) Seminar, two hours. Designed for graduate students (or undergraduate students with consent of instructor). Review of recent literature in immunology, biology, and biochemistry of cancer, with emphasis on fundamental studies involving cell-mediated immunity, humoral response, tumor specific antigens, and new techniques. Discussion of reports on scientific meetings. Each course may be repeated for credit. S/U or letter grading.

296. Seminar: Research Topics in Microbiology, Immunology, and Molecular Genetics. (1 to 4) Seminar, two hours; research group meeting, one hour. Limited to departmental graduate students. Advanced study and analysis of current topics in microbiology, immunology, and molecular genetics. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

298. Current Topics in Microbiology, Immunology, and Molecular Genetics. (2) Seminar, two hours. Presentation of student oral critiques and participation in discussions on assigned topics. May be repeated for credit. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprenticeship person employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495A. Preparation for Teaching Microbiology in Higher Education I. (2) (Formerly numbered 495.) Seminar, two hours. Designed for graduate students. Study of problems and methodologies in teaching microbiology, including workshops, seminars, apprentice teaching, and peer observation. S/U grading.

495B. Preparation for Teaching Microbiology in Higher Education II. (1) Seminar, one hour. Requisite or corequisite: course 495A. Designed for first-time teaching assistants to be taken term in which they teach. In odd weeks, discussion of developments in student classes, with instruction on digital pedagogy and evaluation of student teaching. In even weeks, participation in online discussion forum for case studies. S/U grading.


stress practical skills such as first aid, land navigation, survival techniques, rappelling, military tactics, and scenario-driven leadership action courses. Non-ROTC students may enroll in many of the military science courses without enrolling in the ROTC program.

Additionally, students who decide to become Army officers can receive summer training in military parachuting (Airborne School at Fort Benning, GA), helicopter operations that include rappelling from a hovering helicopter (Air Assault School in Hawaii), and mountaineering operations (Northern Warfare School in Alaska).

Scholarships are available for two, three, and four years of academic study and are awarded on a competitive basis. Army scholarships pay for full tuition and mandatory fees or housing, up to $10,000, and provide a tiered stipend ranging from $3,000 to $5,000 per year and a $1,200 book allowance. Nonscholarship, competitive Army ROTC scholarships pay up to $10,000, and provide a tiered stipend ranging from $3,000 to $5,000 per year. Students in the program also compete for over $50,000 in military science courses.

Admission to the Advanced Course is limited to selected students who meet all academic and physical requirements. Students in this course receive a subsistence allowance between $450 and $500 a month for 10 months during each of the two academic years, plus military science uniforms. After completion of the Advanced Course and graduation, students have the opportunity to be commissioned as second lieutenants in one of the Army’s 16 specialty areas in either the Army National Guard, Reserve, or Active Army. Students’ preferences are a major factor in determining which specialty is awarded.

Students selected for Advanced ROTC must attend a five-week leadership development and assessment course between their Military Science III and IV year. Cadets receive an allowance for travel expenses and are paid for attendance.

The active duty obligation for those students selected to enter the Reserves or National Guard is for initial training, and only for a period of several months. The active duty obligation for those students commissioned into the Active Army is three years. Students who accept ROTC scholarships and enter the Active Army serve one additional year. ROTC students wishing to obtain certain advanced degrees may be granted a delay in reporting to their initial assignment.

Four-Year Program

Students are enrolled in the Basic Course (freshman and sophomore years) on a voluntary basis. After completion of the Basic Course and before entrance into the Advanced Course (junior and senior years), students are required to execute a contract with the Department of the Army agreeing to complete the Advanced Course and accept a commission if offered.

The two-year program is designed for students who receive placement credit for two years of ROTC and directly enter the Advanced Course. Placement credit may be given for completing three years of high school Junior ROTC, attending a paid ROTC Leaders’ Training Course, membership in the Army Reserves or National Guard, completing two years of college-level Air Force or Navy ROTC, or previous active duty military service. The Army also allows enrollment in the two-year program while students attend graduate school.

Commissioning

Successful completion of the Advanced Course program and a bachelor’s degree may lead to a commission as a second lieutenant in the Army Reserves, National Guard, or Active Army.

Military Science

Lower-Division Courses

Z. Leadership Laboratory. (No credit) Laboratory, three hours (lower-division cadets) or four hours (upper-division cadets). All cadets must be concurrently enrolled in a military science course; upper-division cadets must also be under a contract obligation with department. Designed to allow cadets to apply leadership techniques and military skills taught in classroom and to develop their confidence as future military officers. No grading.

11. Foundations of Officership. (2) Lecture, one hour. Introduction to issues and competencies that are central to commissioned officer’s responsibilities. Framework established to understand officership, leadership, military customs, briefings, and life skills such as physical fitness, nutrition, and time management. P/NP or letter grading.

12. Basic Military Leadership. (2) Lecture, one hour. Prerequisite: course 11. Introduction to fundamentals of leadership, Army leadership values, ethics, and counseling techniques. Foundation for Army leadership fundamentals central to commissioned officer’s responsibilities established. P/NP or letter grading.


21. Individual Leadership Development. (3) Lecture, two hours. Introduction to various individual leadership personality types, in combined lecture, discussion, and experiential learning, to assist students in development of their own individual leadership style. Additional emphasis on military factors and principles of leadership, goal setting, basic communication, and consideration of others. P/NP or letter grading.

22. Leadership Development and Military Planning. (3) Lecture, two hours. Prerequisite: course 21. Discussion of various methods of communication, planning, and decision making, through combined lecture, discussion, and experiential learning, with focus on written communication and group communication essential for leadership development. Introduction to and application of military planning process in developing operations orders. P/NP or letter grading.

23. Subordinate Development and Army Organization. (3) Lecture, two hours. Prerequisite: course 22. Discussion/application of team-building techniques and subordinate development of both the instructor and fellow students. P/NP or letter grading.

U.S. Military History. (3) Lecture, three hours; discussion, one hour. Survey of American military history from 1860 to the present to the study of war, strategy, and technological developments set against economic, political, and diplomatic concerns. Impact of warfare on society.

131. Tactical Planning and Analysis. (4) Lecture, three hours; laboratory, four hours. Examination of leadership development process used to evaluate military leadership performance. Examination of how to conduct individual and small unit training as well as introduction to basic principles of tactics. Emphasis on study of reasoning skills, troop leading procedures, and military orders process. P/NP or letter grading.

132. Army Officership and Communication. (4) Lecture, three hours; laboratory, four hours. Examination of officership that culminates in detailed case study. Interpersonal communication, with focus on general communication theory as well as written and spoken communication skills. Presentation of information briefing to receive feedback from both instructor and fellow students. P/NP or letter grading.

133. Leadership and Problem Solving. (4) Lecture, three hours; laboratory, four hours. Examination of role communications, values, and ethics play in effective leadership, including ethical decision making, consideration of others, transactional and transformational leadership, and survey of Army leadership doctrine. Emphasis on improving oral and written communication abilities and leadership development and assessment. P/NP or letter grading.

141. Leadership and Management. (4) Lecture, three hours; laboratory, four hours. Interactive course to develop student proficiency in planning and exe-
Molecular and Medical Pharmacology

David Geffen School of Medicine

23-120 Center for Health Sciences
Box 951735
Los Angeles, CA 90095-1735

310-825-0390
gradinfo@mednet.ucla.edu
http://www.pharmacology.ucla.edu

Michael E. Phelps, PhD, Chair
Samson A. Chow, PhD, Vice Chair
Johannes Czernin, MD, Vice Chair
Aron F. Hadjioannou, PhD, Vice Chair
Harvey R. Herschman, PhD, Vice Chair
Caius G. Radu, MD, Vice Chair
Anna M. Wu, PhD, Vice Chair

Professors
Gautam Chaudhuri, MD, PhD
Samson A. Chow, PhD
Johannes Czernin, MD
Magnar Dahborn, PhD, in Residence
Steven M. Dubinett, MD
James S. Economou, MD, PhD
Frederick (Fritz) C. Elber, MD
Thomas G. Graebner, PhD
Ming Guo, MD, PhD
Arion F. Hadjioannou, PhD
David A. Hovda, PhD
Jing Huang, PhD
Michael E. Jung, PhD
Daniel L. Kaufman, PhD
David A. Krogstad, MD, PhD
Raphael D. Levine, PhD
Gerald S. Lipshultz, MD, in Residence
Roger S. Lo, MD, PhD
Edythe D. London, PhD, in Residence (Thomas P. and Katherina K. Pike Professor of Addictive Studies)
John C. Mazzotta, MD, PhD

William P. Melega, PhD, in Residence
Michael E. Phelps, PhD (Norton Simon Professor of Biophysics)
Caius G. Radu, MD
Srinivasu T. Reddy, PhD, in Residence
Antoni Ribas, MD
Orian Shirihai, MD, PhD
Desmond Smith, MD, PhD
Ren Sun, PhD
Yu E. Sun, PhD, in Residence
Hsian-Rong Tseng, PhD
Owen N. Witte, MD (Presidential Professor of Developmental Immunology)
Anna M. Wu, PhD
Lily Wu, MD, PhD

Professors Emeriti
Jorge R. Barrio, PhD
Arthur K. Cho, PhD
Cameron B. Gundersen, PhD
Sung-Cheng (Henry) Huang, DSc
Louis J. Ignarro, PhD (Nobel laureate, Jerome J. Belzer Professor Emeritus of Medical Research)
Richard W. Olsen, PhD
Naglichettai Sathyamurthy, PhD
Heinrich R. Schelbert, MD, PhD
Ligia G. Toro, PhD

Associate Professors
Steven J. Bensinger, VMD, PhD
Heather R. Christofori, PhD
Timothy R. Donahue, MD
Sherrel G. Howard, PhD
Huy Linh, PhD
Robert M. Prins, PhD, in Residence
R. Michael van Dam, PhD
Ting-Ting Wu, PhD, in Residence

Assistant Professors
Peter M. Clark, PhD
Ajit S. Divakaruni, PhD
Pei Y. Keng, PhD
Jennifer M. Murphy, PhD
David A. Nathanson, PhD
Samman Sadeghi, PhD, in Residence

Adjunct Professors
Robert D. Damoiseaux, PhD
Mei Sheng Jiang, MD
Jide Tian, MD
Hong Wu, MD, PhD

Adjunct Associate Professor
Joy A. Umbach, PhD

Adjunct Assistant Professors
Heather D. Agnew, PhD
Daniel Braas, PhD
Roy Doumani, JD
Jason T. Lee, PhD
Jennifer T. McCaney, PhD
Tove Olafsen, PhD
Roger J. Slavik, PhD
Ratan N. Tata
Wei Wei, PhD

Scope and Objectives

The Department of Molecular and Medical Pharmacology provides an opportunity for gifted students to work with accomplished faculty members toward making novel discoveries in basic and clinical research.

Departmental research interests span a broad range of studies by integrating biological, physical, engineering, and medical sciences to explore mechanisms of disease in biological systems from in silico through a single cell to the whole organism level, while encompassing patient studies. Faculty members strive to understand basic biological systems and disease states and, where appropriate, to use these observations to develop both new molecular diagnostic technologies and new molecular therapeutic agents.

With the department as home to the Crump Institute for Molecular Imaging and the Ahmanson Translational Imaging Division with its nuclear medicine and positron emission tomography (PET) imaging research and clinical service, students have access to both state-of-the-art science and technology and the opportunity to make a direct impact on patient care. In addition, the department is home to the Business of Science Center. This program provides education, experience, and industry mentorship to graduate students in the department and in other academic programs to prepare them for professional careers.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Molecular and Medical Pharmacology offers Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Molecular and Medical Pharmacology but does not admit applicants who seek only an MS degree.

The department also offers two MD/PhD programs concurrently with the Geffen School of Medicine. One is the Medical Scientist Training Program (MSTP) in which candidates are medical students that have been accepted into MSTP by the School of Medicine in order to qualify. The second is the Specialty Training and Advanced Research (STAR) Program in which candidates are post-MD housestaff (interns, residents, or fellows) who have been accepted into the STAR Program by its selection committee in order to qualify.

The department, together with the Division of Laboratory Animal Medicine, offers PhD or postdoctoral training combined with residency training for veterinarians (with DVM or DVM/PhD degrees) in the Veterinary Investigator in Scientific Training and Advancement (VISTA) program.

Note: There is no degree program in pharmacy at UCLA.

Molecular and Medical Pharmacology

Upper-Division Courses

M110A. Drugs: Mechanisms, Uses, and Misuse. (4) (Same as Molecular Toxicology M110A.) Lecture, four hours (seven weeks); discussion, four hours (three weeks). Requisites: Life Sciences 2, 3. Course M110A is requisite to 110B. Introduction to pharmacology and toxicology for undergraduate students, emphasizing drug development and mechanisms of action of drugs and toxic agents. Letter grading.
119B. Drugs: Mechanisms, Uses, and Misuse. (4) Lecture, four hours (seven weeks); discussion, four hours (three weeks). Requisites: course M110A, Life Sciences 2, 3. Introduction to pharmacology for undergraduate students, emphasizing principles underlying mechanism of action of drugs, their development, control, rational use, and misuse. Letter grading.

149. Group Seminars and Discussions: Cross-Disciplinary Scholars in Science and Technology Project. (4) Seminar, two hours; discussion, two hours. Limited to Cross-Disciplinary Scholars in Science and Technology (CSSST) students. Communication and collaboration skills, specifically in interdisciplinary settings and introduction to research project design and proposal process. Students submit written CSSST project proposal and give oral presentations of scientific proposals. May be repeated for credit. Letter grading.

199. Directed Research in Molecular and Medical Pharmacology. (2 to 8) Tutorial, three hours per week per unit. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Special studies in pharmacology, including either reading assignments or laboratory work or both, designed for proper training of students. Culuminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200. Introduction to Laboratory Research. (8) Laboratory, eight to 20 hours. Individual projects in laboratory research for beginning graduate students. At end of each term students submit to their supervisor reports covering research performed. Pharmacology graduate students must take this course three times during their first two years in residence. Letter grading.

203. Medical Pharmacology. (2) Lecture, zero to two hours; discussion, zero to two hours. Requisites: courses 211A, 211B. Series of lectures and case presentations designed to illustrate principles of pharmacology in a clinical context, and solution of practical therapeutics by reference to pharmacokinetics, mechanisms of action, and disposition of drugs. S/U or letter grading.

M205A. Introduction to Chemistry of Biology. (4) (Same as Chemistry CM205A.) Lecture, three hours; discussion, one hour. Introduction to chemical biology and computational chemistry. Basic principles of chemical utility of synthesis in biochemical research, peptidomimetics, designed reagents for cellular imaging, natural product biosynthesis, protein engineering and design. Letter grading.


211A-211B. Principles of Pharmacology. (4-2) Lecture, four hours; discussion, one hour; nine hours. Preparation: mammalian physiology, biochemistry. Systematic consideration of principles governing interaction between drugs and biological systems and of principal drugs of groups used in therapeutics. Particular attention on modes of action, pharmacokinetics, and disposition to provide a scientific basis for their rational use in medicine. S/U or letter grading.


237. Research Frontiers in Cellular and Molecular Pharmacology. (6) Lecture, six hours; laboratory, five hours total. Detailed examination of principles of pharmacology and mechanisms of drug action at organ, tissue, cellular, and molecular levels, with emphasis on specific research orientations, receptor-effector coupling, neurotransmitters, cardiovascular pharmacology, autonomic and central nervous system pharmacology. Letter grading.

M241. Introduction to Chemical Pharmacology and Toxicology. (8) (Same as Molecular Toxicology M241L.) Lecture, six hours. Preparation: organic and biological chemistry. Designed for molecular and medical students, with particular emphasis on implications and relevance to human disease and integration of biology with mechanisms underlying disease development and applications in therapy as they apply to cancer biology, infectious disease, and development of new therapies. Letter grading.

M248. Introduction to Biological Imaging. (4) (Same as Bioengineering M248 and Physics B 248) Lecture, three hours; laboratory, one hour; outside study, seven hours. Exploration of role of biological imaging in modern biology and medicine, including imaging physics, instrumentation, image processing, and applications of imaging for range of modalities. Practical experience provided through series of imaging laboratories. Letter grading.

251. Seminar: Pharmacology. (2) Seminar, two hours. Requirements: satisfactory laboratory performance and participation and agreement to present seminar and discussion of graduate student research project. Letter grading.

M252A. Molecular Mechanisms of Human Diseases I. (4) (Same as Molecular, Cellular, and Integrative Physiology M252A.) Lecture, four hours. Preparation: prior satisfactory molecular biology coursework. Corequisite: course M252B. Fundamental concepts and methodologies in modern biology, with emphasis on implications and relevance to human disease and integration of biology with mechanisms underlying disease development and applications in therapy as they apply to cancer biology, infectious disease, and modern biomedical research. Letter grading.

M252B. Seminar: Molecular Mechanisms of Human Diseases II. (2) (Same as Molecular, Cellular, and Integrative Physiology M252B.) Seminar, two hours. Corequisite: course M252A. Reading, review, and discussion of primary research literature addressing fundamental concepts and methodologies in modern biology, with particular emphasis on implications and relevance to human disease and integration of biology with mechanisms underlying disease development and applications in therapy as they apply to cancer biology, infectious disease, and modern biomedical research. Letter grading.

M257. Introduction to Toxicology. (4) (Same as Pathology M257.) Corequisite: course M252B. Biochemical and systemic toxicology, basic mechanisms of toxicology, and the principles of research design and methodology. Letter grading.

M258. Pathologic Changes in Toxicology. (4) (Same as Pathology M258.) Designed to give students experience in learning normal histology of tissues which are major targets of toxic and the range of pathologic changes that occur in these tissues (liver, bladder, lung, kidney, nervous system, and vascular system). S/U or letter grading.

261. Institute for Molecular Medicine Seminar Series: Analysis and Discussion. (2) Seminar, one hour. Corequisite: course 251. Limited to graduate students. In-depth evaluation of Institute for Molecular Medicine (IMED) Seminar speakers, with focus on scientific approach and rationale, experimental methods, novel and pioneering findings (past and present), relevant background information on speakers and their institute, and presentation style and communication strengths. Discussion on characteristics that define and shape leaders in given fields. Students host lunches with seminar speakers, lead discussions on aspects of seminar presentations, and submit write-ups for online Wiki-postings on seminar-specific scientific topics. S/U grading.

M262A. Molecular Mechanisms of Human Diseases II. (4) (Same as Molecular, Cellular, and Integrative Physiology M262A.) Lecture, four hours. Preparation: prior satisfactory molecular biology coursework. Corequisite: course M262B. Fundamental concepts and methodologies in modern biology, with emphasis on implications and relevance to human disease and integration of biology with mechanisms underlying disease development and applications in therapy as they apply to neurological, cardiovascular, and metabolic diseases. Letter grading.

M262B. Molecular Mechanisms of Human Diseases II. (2) (Same as Molecular, Cellular, and Integrative Physiology M262B.) Seminar, two hours. Corequisite: course M262A. Reading, review, and discussion of primary research literature addressing fundamental concepts and methodologies in modern biology, with particular emphasis on implications and relevance to human disease and integration of biology with mechanisms underlying disease development and applications in therapy as they apply to neurological, cardiovascular, and metabolic diseases. Letter grading.

286. Business of Science: Exploring Entrepreneurship Seminar. (1) Seminar, one hour. Limited to graduate students. Further exploration of topics discussed in course 287, allowing students to interact with speakers and bring their individual concerns to table. Past and present students encouraged to enroll. S/U grading.

287. Business of Science. (2) Lecture, two hours. Designed for graduate students. (undergraduate students may enroll with consent of instructor). Introduction to principles of business and entrepreneurship in technology sectors. Basic business skills taught to effectively develop and advance one’s ideas and within academic environment. Application of course material by performing feasibility studies that have potential to receive funding and become actual companies. Exploration of business plan formulation, particularly with regard to formation and operation of new business ventures. Presentations by and questioning of successful technology entrepreneurs, identifying and evaluating new venture opportunities, development of financing, and entry and exit strategies. S/U or letter grading.

288. Gene Therapy. (4) Lecture, three hours; discussion, one hour. Introduction to basic concepts of gene therapy, wherein treatment of human disease is based on transfer of genetic material. Exploration of procedures and complications with particular emphasis on mechanism of action, dose selection, and feasibility, and development ability to think independently, creatively, and comprehensively. Letter grading.

291. Special Topics in Pharmacology. (4) Lecture, four hours. Examination in depth of topics of current importance in pharmacology. Emphasis on recent contributions of special interest to advanced PhD candidates and faculty. Letter grading.

292. Research Projects, Proposals, and Presentations. (4) Lecture, four hours. Preparation of research projects and presentations on topics of student interest. Limited to departmental majors. Introduction to format and requirements of research proposals, so students can critically read primary papers and give formal presentations. Four hours; four lectures. Letter grading.

298. Seminar: Current Topics in Molecular and Medical Pharmacology. (2) Limited to pharmacology, ACCESS program, and interdepartmental Molecular Biology PhD program students. Students conduct or participate in discussions on assigned topics. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, fellow. Teaching apprentice guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

MOLECULAR BIOLOGY
Interdepartmental Program
College of Letters and Science

172 Boyer Hall
Box 951570
Los Angeles, CA 90095-1570
310-267-5209
mbigrad@lifesci.ucla.edu
http://www.mbi.ucla.edu/mbidp/

M. Luisa Iruela-Arispe, PhD, Chair

Scope and Objectives
The PhD in Molecular Biology is offered under the supervision of an interdepartmental committee. The Molecular Biology Institute serves this committee and the various departments concerned in support of faculty research and teaching associated with the PhD program. Staff members are from participating departments and from the Molecular Biology Institute. Areas for study include cell biology; developmental biology and neurobiology; nucleic acid biochemistry; gene regulation; immunobiology; microbiology/virology and pathogenesis; molecular evolution and paleobiology; oncogenes and signal transduction; plant molecular biology; protein and enzyme structure and function; genomics; bioinformatics; and structural biology.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degree
The Molecular Biology Program offers the Doctor of Philosophy (PhD) degree in Molecular Biology.

Molecular Biology

Graduate Courses

252. Writing for Science (1) Seminar, one hour. Corequisite: Biological Chemistry 251A or 251B or 251C. Limited to first-year Molecular Biology PhD students. Development of specific skills in scientific writing within context of one advanced course on mechanics of gene transcription. Letter grading.

254A-254D. Concepts in Molecular Biosciences. (3 each) (Formerly numbered Biological Chemistry 254A-254D.) Lecture, three hours; discussion, two hours. Letter grading:
254A. (3) (Formerly numbered Biological Chemistry 254A.) Lecture, three hours; discussion, two hours. Limited to human genetics and molecular biology graduate students. Five-week course covering four basic experimental approaches of biochemistry and molecular biology in context of various specific topics, including (1) structural biology, with protein and nucleic acid structure and molecular recognition, (2) use of cell-free and purified in vitro systems to dissect reaction mechanisms, (3) biochemical approaches to dissecting complex reactions/pathways in cells, and (4) enzymology and protein chemistry. Letter grading.
254B. (3) (Formerly numbered Biological Chemistry 254B.) Five-week course. Lecture, three hours; discussion, two hours. Enforced requisites: courses 254A, 254B. Molecular mechanisms underlying complex problems in cell biology. Experimental approaches used to define mechanisms involved in protein targeting, cell structure and subcellular organization, cell communication, and intracellular signaling. Analysis of pathways that connect these cellular processes. Letter grading.
254C. (3) (Formerly numbered Biological Chemistry 254C.) Five-week course. Lecture, three hours; discussion, two hours. Enforced requisites: courses 254A, 254B. Application of biochemical, molecular biological, genetic, and cell biological approaches to understand specialized topics in life and biomedical sciences, including developmental disease, stem cell biology, synaptic transmission in nervous system, cancer, and heart disease. Letter grading.
255. Scientific Writing. (3) Lecture, two hours; discussion, one hour. Limited to first-year Molecular Biology PhD students. Improvement of academic literacy through development of specific skills in scientific writing. Review of principles of effective writing using practical examples and exercises. Topics include principles of good writing, tricks for writing faster and with less anxiety, format of scientific manuscripts, art of editing, and issues in publication and peer review. Letter grading.

298. Current Topics in Molecular Biology. (2) Student presentation/seminar, two hours. Students present oral critiques and participate in discussions on assigned topics. S/U grading.

596. Directed Individual Studies. (2 to 12) Tutorial, to be arranged. Directed individual research or study. May be repeated for maximum of 12 units. S/U grading.

599. PhD Dissertation Research and Writing. (2 to 12) Tutorial, to be arranged. Directed individual studies for students who have advanced to candidacy. May be repeated for maximum of 12 units. S/U grading.

Molecular, Cell, and Developmental Biology

College of Letters and Science
128 Hershey Hall
Box 957246
Los Angeles, CA 90095-7246
310-825-7109
e-mail: mcdbundergrad@ lifesci.ucla.edu
https://www.mcdb.ucla.edu

Utpal Banerjee, PhD, Chair

Professors
John S. Adams, MD
Utpal Banerjee, PhD (Irv ing and Jean Stone Professor)
Jau-Nian Chen, PhD
Amander T. Clark, PhD
Daniel H. Cohn, PhD
Robert B. Goldberg, PhD
Volker Hartenstein, PhD
Ann M. Hirsch, PhD
M. Luisa Iruela-Arispe, PhD
Steven E. Jacobsen, PhD
Tracy L. Johnson, PhD (Maria Rowena Ross Term Professor of Cell Biology and Biochemistry)
Dee-Anne Jones, PhD
James A. Lake, PhD
Frank A. Laski, PhD
Chentao Lin, PhD
Shuo Lin, PhD
Jeffrey A. Long, PhD
William E. Lowry, PhD
Karen M. Lyons, PhD
Hanna K.A. Mikkola, MD, PhD
Matteo Pellegrini, PhD
Alvare Sagasti, PhD

Professors Emeriti
William R. Clark, PhD
John H. Fessler, PhD
Harumi Kasamatsu, PhD
John R. Merriam, PhD
Paul H. O’Lague, PhD
Winston A. Salser, PhD
Clara M. Szego, PhD
Elaine M. Tobin, PhD

Associate Professors
Hilary A. Colier, PhD
Arjun Deb, MD
Atsushi Nakano, MD, PhD

Assistant Professors
Siobhan A. Braybrook, PhD
Andrew S. Goldstein, PhD, in Residence
Hanna K.A. Mikkola, MD, PhD

Lecturers
Tiffany T. Gyrlak, PhD
Pei-Yun Lee, PhD

Adjunct Professor
Nissim Benevisty, MD, PhD

Scope and Objectives
The revolution in modern biology that began with the elucidation of the structure of DNA by Watson and Crick in the 1950s has had a profound effect not only on biological research, but on the way biology is taught as a subject. The field of biology spawned by this discovery, generally called molecular biology, has provided an entirely new framework within which to approach questions in cell and development biology. The specializations, both technical and conceptual, demanded by this field have led to the growth of molecular biology and its
related disciplines into an essentially separate branch of scientific inquiry. Students who complete the requirements for the Bachelor of Science degree in the Department of Molecular, Cell, and Developmental Biology are exceptionally well prepared to pursue careers in cellular and subcellular biological research, biomedical research, or medicine or allied health fields. The degree combines essential background studies in mathematics, chemistry, and physics with a general introduction to all of the biological subjects, as well as in-depth exposure to key topics in molecular, cell, and developmental biology. The PhD degree provides opportunity for advanced concentrated study and requires independent and innovative research that ultimately results in publishable dissertation materials.

**Undergraduate Study**

**Molecular, Cell, and Developmental Biology BS**

The Bachelor of Science degree in Molecular, Cell, and Developmental Biology (MCDB) is designed especially for students who intend to go on to postgraduate work in biology or medicine and for students aiming for entry-level positions in biotechnology-related fields. Students are exposed to basic biological and molecular concepts underlying recent technical advances in molecular, cell, and developmental biology of animals and plants. Areas of emphasis include cell biology, immunology, molecular biology, plant biology, developmental biology, and neurobiology, among others.

**Preparation for the Major**

**Life Sciences Core Curriculum**

**Required:** Chemistry and Biochemistry 14A, 14B, 14BL, 14C, and 14D, or 20A, 20B, 20L, 30A, 30AL, and 30B; Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A, or Life Sciences 30A, 30B, and Statistics 13; Physics 1A, 1B, 1C, 4A, and 4BL, or 5A, 5B, and 5C.

Students must also complete one of two life sciences sequences—either Life Sciences 1, 2, 3, 4, and 23L OR 7A, 7B, 7C, 23L, and 107. They may not substitute courses in either sequence. Each core curriculum course must be passed with a grade of C– or better, and all courses must be completed with an overall grade-point average of 2.0 or better. Students receiving grades below C– in two core curriculum courses, either in separate courses or repetitions of the same course, are subject to dismissal from the major.

**Transfer Students**

Transfer applicants to the Molecular, Cell, and Developmental Biology major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of general biology with laboratory for majors, preferably equivalent to Life Sciences 1 and 2 OR 7A, 7B, and 7C, one year of calculus, one year of general chemistry with laboratory for majors, and one semester of organic chemistry with laboratory. A second semester of organic chemistry or one year of calculus-based physics is strongly recommended but not required for admission. Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

**The Major**

**Required Courses:** Chemistry and Biochemistry 153A; one course from Molecular, Cell, and Developmental Biology 104AL, 150AL, 187AL, 198B, 198C, 199B, 199C, or Microbiology, Immunology, and Molecular Genetics 103AL; one developmental biology course from Molecular, Cell, and Developmental Biology 138 or C141; one cell biology course from M140 or 165A; and one molecular biology course from 144 or 165B.

Electives: At least 20 upper-division elective units, of which at least 10 must be in courses offered by the department. Any upper-division departmental course, except Molecular, Cell, and Developmental Biology 100, 190A, 190B, 190C, 192A, 192B, 193, 194A, or 199, may be selected. The following courses outside the department may be taken to satisfy a maximum of 10 units in this category: Biostatistics 100A or Statistics 100A, Chemistry and Biochemistry 155C, 155L, 154, 156, C159, CM160A, Ecology and Evolutionary Biology 110, 121, 162, 162L, Human Genetics C144, Microbiology, Immunology, and Molecular Genetics 100L, 101, 102, 103AL, 105, 106, 158, 168, 174, 185A, Physiological Science C126, 166, Society and Genetics M102.

Credit for a maximum of two upper-division developmental biology courses from Molecular, Cell, and Developmental Biology 138, C141, and 143 may be applied toward the major. Due to content overlap, students with credit for both courses 165A and 165B cannot receive major credit for course M140. A maximum of 4 units of approved seminar course credit may be applied toward the electives requirement. A maximum of 12 units of Molecular, Cell, and Developmental Biology 198A through 198D or 199A through 199D may be applied toward the major. Credit for 199 courses from other departments may not be applied except by petition. Any single course may be applied toward only one category within the major (e.g., course C141 may be applied toward the required or elective category but not toward both).

Each course applied toward requirements for preparation for the major and the major must be taken for a letter grade. Majors must earn a C– or better in each course for the major and course, and at least a 2.0 (C) overall average in all courses applied toward the major.

**Honors Program**

**Admission**

The honors program provides exceptional Molecular, Cell, and Developmental Biology majors with the opportunity to do research culminating in an honors thesis. Junior and senior majors who have completed all university-level coursework, including all preparation courses and requirements for the major with an overall grade-point average of 3.0 or better and a 3.5 GPA or better in the required major courses, may apply for admission to the honors program. Students must have the sponsorship of an approved faculty adviser.

For further information and application forms, students should contact the Student Affairs Office, 128 Hershhey Hall, early in their educational planning. Completed applications should be submitted at least two weeks prior to the term in which students plan to begin the honors program.

**Requirements**

The core of the program consists of at least one approved undergraduate seminar course from Molecular, Cell, and Developmental Biology 191 and three research courses (12 units minimum) from 198A, 198B, and 198C, culminating in a thesis.

To qualify for graduation with honors, students must satisfactorily complete all requirements for the honors program and the major and obtain at least an overall 3.0 grade-point average and a 3.5 GPA or better in coursework required for the major. On recommendation by the faculty sponsor and with approval of the thesis by the departmental honors committee, students are awarded no honors, departmental honors, or highest departmental honors. At the discretion of the departmental honors committee, students who have (1) a GPA of 3.6 or better, both overall and in the major and (2) demonstrated exceptional accomplishment on the research thesis are awarded highest departmental honors.

**Computing Specialization**

Majors in Molecular, Cell, and Developmental Biology may select a specialization in Computing by (1) satisfying all the requirements for a bachelor’s degree in the major, (2) completing Program in Computing 10A, 10B, 10C, 30, and 60, and (3) completing one course from Computer Science CM186 or Ecology and Evolutionary Biology C159. A grade of C– or better is required in each course, with a combined grade-point average in the specialization of at least 2.0. Students must petition for admission to the program and are advised to do so after completing Program in Computing 10B (petitions should be filed in the Student Affairs Office). Students graduate with a bachelor’s degree in their major and a specialization in Computing.

**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

**Graduate Degrees**

The Department of Molecular, Cell, and Developmental Biology offers Master of Arts (MA), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Molecular, Cell,
Molecular, Cell, and Developmental Biology

Lower-Division Courses

30H. Collaborative Undergraduate Research Laboratory in Molecular Cell and Developmental Biology (5) Lecture, two hours; laboratory, six hours. Limited to 24 students in Collaborative Undergraduate Research Laboratory (CURL), sponsored by Howard Hughes Medical Institutes Programs. Basic training in biological research, covering topics in molecular genetics, molecular biology, model organism biology, and data analysis. Letter grading.

40. AIDS and Other Sexually Transmitted Diseases. (5) Lecture, 90 minutes. Developmental biology of various types of human stem cells. Important functional differences between embryonic, hematopoietic, and adult stem cells, as well as differences in their biomedial potentials. Discussion of history of debate surrounding embryos, as well as various ethical, political, and economic aspects of stem cell research. P/NP or letter grading.

50. Biomedical Ethics. (5) Lecture, two hours; laboratory, six hours. Emphasis on genetic engineering history and foundational questions that determine how organized tissues across animal kingdom, distinct features that understand conserved nature of developmental processes in cells and from theoretical applied perspective for using molecular biology as laboratory tool. Special emphasis on mechanisms that relate to chromatin and histone modifications, DNA replication and repair, transposition, microRNAs, meiosis, and splicing. Application of molecular biology as tool to understand embryonic development, reprogramming, cancer, and stem cells. Development of sophisticated understanding of DNA, RNA, and protein as well as capability of designing experiments to address fundamental questions in biology and interpreting experimental data. Letter grading.


150AL. Research Immersion Laboratory in Plant-Microbe Ecology. (5) Laboratory, four hours. Enforced requisites: courses C150, 150AL. Limited to Molecular, Cell, and Developmental Biology and Microbiology, Immunology, and Molecular Genetics majors. Introductory plant biology laboratory to give students hands-on experience doing experiments and making their own observations about plant biology. Letter grading.

150BL. Advanced Research Investigations in Plant-Microbe Ecology. (4) Laboratory, six hours. Enforced requisites: courses C150, 150AL. Limited to Molecular, Cell, and Developmental Biology and Microbiology, Immunology, and Molecular Genetics majors. Analysis and presentation of data obtained in course 150AL. Investigation to be primarily computational in nature whereby students use bioinformatic or mathematical modeling software to interpret, expand, or refine datasets. Use of graphics software to prepare figures and illustrations, posters, and reports. Analysis of molecular biology as tool to understand embryonic development, reprogramming, cancer, and stem cells. Development of sophisticated understanding of DNA, RNA, and protein as well as capability of designing experiments to address fundamental questions in biology and interpreting experimental data. Letter grading.
CM156. Human Genetics and Genomics. (Same as Microbiology CM156.) Lecture, three hours; discussion, two hours. Requisites: Life Sciences 3, 4, 23L. Application of genetic principles in human populations, with emphasis on genomics, family studies, positive and negative Mendelian and non-Mendelian disorders, cancer genetics, animal models, cytogenetics, pharmacogenetics, population genetics, and genetic counseling. Lectures and readings in literature, with focus on current questions in fields of medical and human genetics and methodologies appropriate to answer such questions. Concurrently scheduled with course CM256. Letter grading.

162C. Molecular, Cellular, and Behavioral. (5) Lecture, three hours; discussion, one hour. Enforced requisites: Life Sciences 4, two-semester divisional, cellular, and developmental biology or neuroscience courses. How do worms decide whether something smells good or bad? What happens to brain of fly when it is exposed to alcohol? How does fly embryo decide whether to respond to touch by swimming slowly or rapidly escaping? Behavior of animals, including humans, is controlled by ensembles of neurons that together form neural circuits. Understanding how these circuits function is unfailing goal of neurobiology. Techniques for understanding these techniques have been used in past to investigate logic of neural circuits. Scientists now ask how genes make neural circuits work and use variety of cutting-edge genetic and molecular techniques to understand current primary literature that applies these approaches to three models: octofin in nematode worms, alcohol-induced behavior in fruit flies, and motor responses in zebrafish. Letter grading.

165A. Biology of Cells. (5) Lecture, three hours; discussion, one hour. Requisites: Chemistry 140D or 30B, Life Sciences 3. Not open for credit to students with credit for course 100. Molecular basis of cellular structure and function, with focus on each individual cellular organelle, as well as interaction of cells with extracellular environment and with other cells. Material presented in context of experimental questions and answers to incorporate concept of scientific method and recent advances in cell biology research. Exposure in discussions to recent scientific articles that directly relate to information examined in lectures. Letter grading.

165B. Molecular Biology of Cell Nucleus. (5) Lecture, three hours; discussion, two hours. Requisites: course 165A, Chemistry 14D or 30B, Life Sciences 3, 4, Continuation of course 165A. Molecular biology of eukaryotic cell nucleus, with focus on structure, transcription, replication, and repair of eukaryotic genome; eukaryotic gene expression, including transcription, translation, and transport; cell cycle and cancer. Study of advanced specialized topics to allow integrated approach to molecular cell biology. Material presented in context of experimental questions and answers to incorporate concept of scientific method and recent advances in cell biology research. Exposure in discussions to current literature that directly relates to information examined in lectures. Letter grading.

168. Stem Cell Biology. (5) Lecture, three hours; discussion, one hour. Requisites: courses 138, 165A. State-of-art education of embryonic and adult stem cells and how these pluripotent/multipotent cells can be used to treat congenital defects, diseases, or injury in humans. Review of current knowledge of human and mouse embryonic stem cells and how they develop into various tissue types. Discussion of adult stem cells in hematopoietic and non-hematopoietic systems to provide examples of tissue-specific stem cells and their impact in human disease. Examination of various model organisms as examples of how model systems are used to discover fundamental principles in stem cell biology. How advances in cell and molecular biology and tissue engineering can be applied to use of stem cells in regenerative medicine. Letter grading.


172D. Genomics and Bioinformatics. (5) Lecture, three hours; discussion, one hour. Requisite: course 144 or 165B or Chemistry 153B or Microbiology 132. Genomics is study of complete repertoire of molecules that contribute to disorders and rationales for pharmacotherapy. How advances in computational biology and information technology to measure changes in gene expression, analysis of microarray data including clustering and promoter analysis, proteomics techniques have been used in past to investigate logic of neural circuits. Scientists now ask how genes make neural circuit work and use variety of cutting-edge genetic and molecular techniques to understand current primary literature that applies these approaches to three models: octofin in nematode worms, alcohol-induced behavior in fruit flies, and motor responses in zebrafish. Letter grading.

C174A–C174D. Advanced Topics in Cell and Molecular Biology. (2, each) Lecture, two hours. Requisites: courses 100 or C139 or M140, 144, Life Sciences 4. Recent developments in fields of molecular, cell, and developmental biology. Concurrently scheduled with courses C222A–C222D. Letter grading.

C174A. Molecular Evolution. (2) Lecture, two hours. Requisites: courses 100 or C139 or M140, 144, Life Sciences 4, C174B in one moe. Molecular evolution of circular level; formal testing of evolutionary hypothesis using sequencing data. Letter grading.


M175A. Cellular and Systems Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisites: Chemistry 14C or 30A (14C may be taken concurrently), Life Sciences 2, Physics 1B or 1BH or 6B or 6HH. Not open for credit to students with credit for Physiological Science 111A. For Neuroscience and Physiological Science majors, grade of C– or better is required to proceed to Neuroscience M101B or Physiological Science 111B. Cellular neurophysiology, membrane potential, action potentials, and synaptic transmission. Sensory systems and motor system; how animals use sense and control movement. P/NP or letter grading.

M175B. Molecular and Developmental Neurosciences. (5) Lecture, four hours; discussion, 90 minutes. Requisites: course M175A (or Neuroscience M101A or Psychology M177A or Psychology M177B or Psychology M177C). Neuroscience majors must have grade of C– or better) or Physiological Science 111A or Psychology 1115, Life Sciences 3, 4 (4 may be taken concurrently). Molecular biology of channels and receptors: focus on voltage dependent channels and neuromodulator receptors. Molecular biology of supramolecular mechanisms: synaptic transmission, axonal transport, cytoskeleton, and muscle. Classical experiments and modern molecular approaches in developmental neurobiology. P/NP or letter grading.

M175C. Behavioral and Cognitive Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisite: course M175A (or Neuroscience M101A or Physiological Science M180A or Psychology M117A; Neuroscience majors must have grade of C– or better) or Physiological Science 1115. Neural mechanisms underlying motivation, learning, and cognition. P/NP or letter grading.

180A. Scientific Analysis and Communication I. (2) Seminar, two hours. Requisite: course 196A. Students read and discuss scientific articles and give presentations, introducing research topics using relevant primary literature. Critical aspects of research process, including record keeping, ethics, laboratory safety and citizenry, mechanics of scientific writing, diverse approaches to research, and project responsibilities and ownership. Acquisition of in-depth understanding of specific topic, preparation of oral and written communication skills, and full appreciation of process of doing good science and becoming skilled researchers. Letter grading.

180B. Scientific Analysis and Communication II. (2) Seminar, two hours. Requisites: courses 196A, 196A. Enforced corequisite: course 196B. Students give presentations similar to laboratory meeting or research symposium talks. Researchers discuss project goals, methodological approaches, results, and conclusions. How to write research papers as well as prepare and present scientific posters. Provide mechanisms to deliverable data, research achievements and creation of sense of pride for work accomplished as skilled researchers. Letter grading.

M181. Biological Bases of Psychiatric Disorders. (4) (Same as Neuroscience M120, Physiological Science M181, Psychiatry M181, Psychology M177D) Lecture, three hours. Requisites: course M175A (or Neuroscience M101A or Physiological Science M111A or Psychology M115). Underlying brain systems involved in psychiatric symptoms and neurological disorders, including schizophrenia, depression, bipolar disorder, obsessive-compulsive disorders. Provides basic understanding of brain dysfunctions that contribute to disorders and rationales for pharmacological treatments. P/NP or letter grading.

187AL. Research Immersion Laboratory in Genomewide Analysis. (2) Laboratory, six hours; research group meeting, two hours. Enforced requisites: Life Sciences 4, 23L. Course 187AL is enforced requisite to 187BL. Limited to Molecular, Cell, and Developmental Biology and Microbiology, Immunology, and Molecular Genetics majors. Introduction to cutting-edge genomic technologies and bioinformatics methods and resources for genome annotation. Students propose original research projects related to genome annotation and create their projects using bioinformatics tools. Latest assembly of DNA and RNA from C. tropicalis and algae organism that have limited genome annotation are available, to be provided. May not be repeated for credit. Letter grading.

187BL. Advanced Research Analysis in Genomic Biology. (4) Laboratory, six hours. Enforced requisite: course 187AL. Limited to Molecular, Cell, and Developmental Biology and Microbiology, Immunology, and Molecular Genetics majors. Continuation, completion, and refinement of research on annotation of genomewide analysis. Use of comprehensive computational tools to analyze microbial genomic and metagenomic datasets. Use of graphics software to prepare figures and illustrations for presentations, posters, reports, and websites (database entries). Research accomplishments discussed in weekly seminar-style meetings in which student
groups create PowerPoint slides and formally present results to class. Final report describing entire research project required. Letter grading.

188. Special Courses in Molecular, Cell, and Developmental Biology. (2) (Formerly numbered 188A.) Seminar, one hour. Departmentally sponsored. May be repeated once for credit with topic change. Letter grading.

190A-190B-190C. Joint Research Colloquia. (1-1-1) Seminar, one hour. Departmentally sponsored. Limited to juniors/seniors. Designed to bring together students undertaking supervised tutorial research in model systems in different meeting/seminar settings with one or more departmental faculty members whose laboratories are working on same or related model systems. Discussion and presentation of student work or related work in discipline to encourage a more sophisticated understanding of most current topics in research fields of students or fields used by model organisms. P/NP or letter grading. 190A. Plant Model Systems. 190B. Invertebrate Model Systems. 190C. Vertebrate Model Systems.

191. Variable Topics Research Seminars: Molecular, Cell, and Developmental Biology. (2) Seminar, two hours. Designed for junior/senior departmental majors. Includes lab work with strong commitment to pursue graduate studies in molecular, biochemical, physiological, and biomedical fields. Weekly variable topics course with reading, discussion, and presentation. May be repeated from current literature. May be repeated once for credit. P/NP or letter grading.

192A. Undergraduate Practicum in Molecular, Cell, and Developmental Biology. (1-4) Seminar, two hours. Limited to junior/senior Molecular, Cell, and Developmental Biology majors. Training and supervised practicum for advanced undergraduate students. Students assist in preparation of materials and development of innovative programs under guidance of faculty members in small course settings. Consult Undergraduate Office for further information. May not be applied toward course requirements for Molecular, Cell, and Developmental Biology major. May be repeated once for credit. P/NP or letter grading.

192B. Undergraduate Practicum: CityLab. (2) Seminar, two hours. Limited to juniors/seniors in any life sciences major. One hour for training and one hour for supervised practicum for advanced undergraduate students. Students assist in preparation of materials and development of innovative programs under guidance of faculty members in small course settings. Consult Undergraduate Office for further information. May not be applied toward course requirements for Molecular, Cell, and Developmental Biology major. May be repeated once for credit. P/NP or letter grading.

193. Journal Club Seminars: Molecular, Cell, and Developmental Biology. (1) Seminar, two hours. Corequisites: course 198A or 198B or 198C or 199A or 199B or 199C. Limited to juniors/seniors. Development of independent understanding of and ability to discuss current literature in field of student's own research. May be repeated for credit. P/NP grading.

194A. Research Group Seminars: Molecular, Cell, and Developmental Biology. (1) Seminar, two hours. Corequisites: course 198A or 198B or 198C or 199A or 199B or 199C. Limited to juniors/seniors. Involvement in weekly molecular's research group meeting to encourage student participation in research and to stimulate progress in specific research areas. Discussion of use of specific research methods and current literature in field or of research of faculty members or students. May be repeated for credit. P/NP or letter grading.

194B. Research Group Seminars: Current Topics in Biomedical Sciences. (2) Seminar, two hours. Limited to juniors/seniors in research traineeships or those who have strong commitment to pursue graduate study in molecular, biochemical, physiological, or biomedical fields. Weekly presentation and discussion of paper selected from current literature. May be repeated for credit. Letter grading.

196A. Research Apprenticeship I in Molecular, Cell, and Developmental Biology. (4) Tutorial, 12 hours. Enforced requisites: courses 3, 4, 3.0 major pre/and/or major grade-point average, and at least one term of prior experience in same laboratory in which apprentice has participated. Enforced corequisite: course 190A. Course 190A is required to 196B. Designed for undergraduate students who are interested in pursuing inquiry-based and hypothesis-driven research experience in laboratory of departmental or preapproved faculty mentor. Guided research course to be taken in conjuction with course 190A, followed by 190A/190B continuation research course 196B. Technical aspects vary depending on specific laboratory; however, all students must learn how to apply scientific method: propose hypothesis, identify experiments to address hypothesis, perform experiments, and analyze results. How to record information from experimental activities into laboratory notebooks and to write research proposals. Letter grading.

196B. Research Apprenticeship II in Molecular, Cell, and Developmental Biology. (4) Tutorial, 12 hours. Enforced requisites: courses 190A, 190B. Enforced corequisite: course 190B. Technical aspects vary depending on specific laboratory; however, all students must learn how to apply scientific method: propose hypothesis, identify experiments to address hypothesis, perform experiments, and analyze results. How to record information from experimental activities into laboratory notebooks and to write research proposals. Letter grading.

198A-198D. Honors Research in Molecular, Cell, and Developmental Biology. (4 each) Tutorial, 12 hours. Requisites: courses 3, 4, 3.0 major pre/ and/or major grade-point average, and at least one term of prior experience in same laboratory in which apprentice has participated. S/U or letter grading. 198A. Seminar, two hours. Requisites: courses 100 or C139 or M140, Life Sciences 3.0 major pre/ and/or major grade-point average, and at least one term of prior experience in same laboratory in which apprentice has participated. S/U or letter grading. 198B. Laboratory, three hours. Requisites: courses 100 or C139 or M140, Life Sciences 4.0 major pre/ and/or major grade-point average, and at least one term of prior experience in same laboratory in which apprentice has participated. S/U or letter grading. 198C. Laboratory, two hours. Requisites: courses 100 or C139 or M140, Life Sciences 4.0 major pre/ and/or major grade-point average, and at least one term of prior experience in same laboratory in which apprentice has participated. S/U or letter grading. 198D. Laboratory, one hour. Requisites: courses 100 or C139 or M140, Life Sciences 4.0 major pre/ and/or major grade-point average, and at least one term of prior experience in same laboratory in which apprentice has participated. S/U or letter grading.


M230B. Structural Molecular Biology Laboratory. (2) (Same as Chemistry M230B.) Laboratory, one hour. Corequisite: course M230B. Methods in structural molecular biology, including proteins, enzymes, and nucleic acids. Laboratory exercises include stoichiometric equation balance, percent composition, molar absorptivity, molecular weight, molecular volume, and partial specific volume of proteins. S/U or letter grading.

M230D. Structural Molecular Biology Laboratory. (2) (Same as Chemistry M230D.) Laboratory, two hours. Corequisite: course M230D. Methods in structural molecular biology, including proteins, enzymes, and nucleic acids. Laboratory exercises include stoichiometric equation balance, percent composition, molar absorptivity, molecular weight, molecular volume, and partial specific volume of proteins. S/U or letter grading.

M234. Genetic Control of Development. (4) (Same as Biological Chemistry M234.) Lecture, four hours. Topics at forefront of molecular developmental biology, including problems in oogenesis and early embryology, pattern formation, axis determination, nervous system development, cell-cell and cell-matrix interactions. S/U or letter grading.

M239. Molecular Basis of Plant Differentiation and Development. (6) Lecture, three hours; discussion one hour. Requisites: Life Sciences 1, 3, 4, 23L. In-depth study of basic processes of growth differentiation and development in plants, with emphasis on mechanisms underlying these processes. Discussion of variety of plant systems, with focus on developing crit-
ical understanding of current experimental basis of research in this field. Concurrently scheduled with course C141. Preparation and presentation of term paper, in addition to other coursework, required of graduate students. Letter grading.

242. Topics in Neurobiology. (4) Lecture, three hours; requisites: course 171. Selected current problems in neurobiology discussed in depth, with emphasis on analysis of original papers. May be repeated for credit. Letter grading.

C250. Current Research in Genetics. (4) Lecture, three hours; discussion, one hour. Enforced requisites: Life Sciences 3, 4. Most people think of plants as static organisms, yet they live in world of symbiosis and community. Plants change atmosphere, enrich soil, and communicate with insects, bacteria, and each other—Earth’s ultimate symbiote. Just as science has revealed over time misconceptions about how things work at deeper levels, scientists and economists now recognize that beyond obvious need to grow above-ground biomass for fuel production, we must better understand how to make that biomass in sustainable manner. Introductory course in chemical ecology and how natural compounds affect gene expression. Emphasis on role of natural compounds in plant/microbe, plant/plant, and plant/herbivore. Interactions; synopses of plant defense mechanisms and responses to microbial infections. Concurrently scheduled with course C150. S/U or letter grading.

254. Seminar: Plant Morphogenesis. (2) Seminar, two hours, S/U or letter grading.

255. RNA Editing. (4) Lecture, two hours; discussion, one hour. Preparation: knowledge of molecular biology and molecular genetics. Discussion of diverse set of novel RNA modification phenomena known as RNA editing. Topics include U insertion/deletion type of editing in trypanosome mitochondria, C to U substitution in apo B mRNA and plant mitochondria, C insertion editing in Physarum mitochondria, etc. Discussion of mechanism, function, and evolution of these phenomena. S/U grading.

CM256. Human Genetics and Genomics. (5) (Same as Microbiology CM256.) Lecture, three hours; discussion, two hours. Requisites: Life Sciences 3, 4, 23L. Application of genetic principles in human populations, with emphasis on genomics, family studies, positional cloning, Mendelian and common diseases, cancer genetics, animal models, cytogenetics, pharmacogenetics, medical genetics, and genetic counseling. Lectures and readings in literature, with focus on current questions in fields of medical and human genetics and methodologies appropriate to answer these questions. Concurrently scheduled with course CM156. Independent research project required of graduate students. Letter grading.

266A-266B-266C. Seminars: Development, Stem Cells, and Disease Mechanisms. (2-2-2) Seminar, two hours. Limited to graduate students. Advanced courses based on research papers on fundamental cellular mechanisms governing development and disease. Disease results from genetically determined or acquired deficits in cell and molecular processes; analysis of these processes in context of normal development indicates ways of dealing with corresponding disease. S/U grading.

M272. Stem Cells, Regeneration and Regenerative Medicine. (4) (Same as Pathology M272.) Lecture, two hours; discussion, two hours. Designed for graduate students. Presentation of current knowledge of embryonic, adult, and induced stem cells and factors that regulate their growth and development. Major emphasis on how advances in cell and molecular biology and tissue engineering can be applied to use of stem cells in regenerative medicine. Bioethical and legal issues related to stem cell research. S/U or letter grading.

276. Seminar: Molecular Genetics. (2) Seminar, two hours. Topics vary each term, S/U or letter grading.

277. Seminar: Genetics. (2) Seminar, two hours, S/U or letter grading.

278. Seminar: Molecular Genetics of Development. (2) Seminar, two hours. Designed for graduate students. Topics vary from year to year, with focus on establishment of position and pattern during embryogenesis by interaction of signal transduction systems and transcription factors. S/U or letter grading.


283. Seminar: Topics in Cell Biology. (2) Seminar, two hours. Discussion of various topics on biology of eukaryotic cells. Topics vary from year to year and include bioenergetics, motility, organelle RNA, membrane structure and function, oncogenic transformation, nuclear organization and function. S/U or letter grading.

284. Seminar: Structural Macromolecules. (2) Seminar, one hour; discussion, three hours. Presentation and discussion of current topics in extracellular active structural macromolecules—their synthesis, structure, and role in cell and developmental biology. Letter grading.

286. Seminar: Plant Development. (2) Seminar, one hour; discussion, two hours. Preparation: one plant physiology course and at least one advanced undergraduate or graduate course in integrative biology or biochemistry. Seminar on specific topics in plant development. Content varies each term. S/U grading.

289. Current Topics in Plant Molecular Biology. (2) Discussion, three hours. Advanced study and analysis of current topics in cell, molecular, and developmental biology. Discussions of recent research literature in field of plant molecular biology. Opportunities for graduate students to discuss individual research work. S/U grading.


295. Seminar: Molecular, Cell, and Developmental Biology. (2) Seminar, two hours. In-depth surveys of recent developments in molecular, cellular, and developmental biology research. Recent research developments in field of plant molecular biology. Opportunities for graduate students to discuss individual research work. S/U grading.

296. Advanced Topics in Molecular, Cellular, and Developmental Biology. (2) Discussion, three hours. Preparation: one plant physiology course and at least one advanced undergraduate or graduate course in integrative biology or biochemistry. Seminar on specific topics in plant development and plant/microbe interactions. S/U grading.

297. Advances in Molecular Analysis of Plant Development and Plant/Microbe Interactions. (2) Discussion, three hours. Preparation: one plant physiology course and at least one advanced undergraduate or graduate course in integrative biology or biochemistry. Seminar on specific topics in plant molecular biology, with emphasis on control of gene expression both during plant development and in plant/microbe interactions. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Preparation for Teaching Molecular, Cell, and Developmental Biology in Higher Education. (2) Seminar, two hours. Preparation: two hours. Recent research developments in field of molecular, cellular, and developmental biology research. Preparation and presentation of primary research articles to learn to critically evaluate research papers and to organize and present seminars on specific research topics. S/U or letter grading.

496. Preparation for Teaching Molecular, Cell, and Developmental Biology. (2) Seminar, two hours. Preparation: one plant physiology course and at least one advanced undergraduate or graduate course in chemical ecology and symbiosis. Seminar on current topics in molecular, cell, and developmental biology research. Recent research developments in field of plant molecular biology. Opportunities for graduate students to discuss individual research work. S/U grading.

596. Directed Individual (or Tutorial) Studies. (2 to 12) Tutorial, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

597. Preparation for MA Comprehensive Examination or PhD Qualifying Examinations. (2 to 12) Tutorial, to be arranged. Preparation: one year of MA or PhD course requirements. S/U grading.

598. MA Thesis Research and Writing. (2 to 12) Tutorial, to be arranged. S/U grading.

guidance of a faculty mentor. The program faculty includes more than 90 professors in the Geffen School of Medicine and College of Letters and Science. Collectively they have been recently ranked by the National Research Council in the top five in the U.S. for their quality as an academic faculty.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degree

The Molecular, Cellular, and Integrative Physiology Program offers the Doctor of Philosophy (PhD) degree in Molecular, Cellular, and Integrative Physiology.

Molecular, Cellular, and Integrative Physiology

Graduate Courses

M200G. Biology of Learning and Memory, (4) (Same as Neurobiology M200G, Neuroscience M220, and Psychology M208.) Lecture, four hours. Molecular, cellular, circuit, systems, neuroanatomy, theory, and models of learning and memory. Cross-disciplinary focus on learning and memory to provide integrative view of subject that emphasizes emerging findings that take advantage of novel groundbreaking models. Letter grading.

214. Research Grant Writing in Biomedical Sciences, (4) Lecture, three hours. Designed for Molecular, Cellular, and Integrative Physiology program students. Training in designing, writing, and evaluating research project and fellowship grants. How grant applications are structured and what features contribute to grant application success. How individual research project grants (R01) and exploratory/development research grants (R21) to National Institutes of Health (NIH) are structured and differ. How applications for predoc toral fellowships from NIH (F31) and American Heart Association (AHA) are written and the differences between the review process. Letter grading.

M215. Molecular and Cellular Foundations of Physiology, (5) (Same as Physiological Science M215.) Lecture, three hours; discussion, two hours. Application of molecular and cellular approaches to systems level questions. Basic foundation for study of major physiological systems, with emphasis on levels of organization from molecular to macroscopic. Letter grading.


249. Seminar: Therapeutic Mechanisms in Muscle Disease, (2) Seminar, two hours. Recent advances have been made in genetic identification of molecular basis of muscle disease, and some mechanisms involved have been elucidated. Focus on muscle diseases in which substantial mechanistic information has been obtained, including particular cellular locations and diseases associated with those locations. Topics include Duchenne muscular dystrophy, congenital muscular dystrophy, limb girdle dystrophy, Ullrich myopathy, and other forms of genetically inherited muscle disease. S/U grading.

250. Current Topics in Molecular, Cellular, and Integrative Physiology, (2) Seminar, two hours. Designed for molecular, cellular, and integrative physiology students. Reading, analysis, critique, and discussion of current research literature in field of molecular, cellular, and integrative physiology. Student presentation of assigned paper. Variable topics. May be repeated for credit. S/U grading.

251. Integrative Genomics for Studying Complex Diseases, (2) Seminar, two hours. Prerequisite: course M252A. supervised and student supervised student presentations to offer graduate students opportunity to acquire deep understanding of advanced integrative genomics approaches and how these approaches can be applied to help understand molecular basis of diverse complex diseases. Topics include transcriptomics, genetics, functional genomics, network biology, and high-level integration. Letter grading.

M252A. Molecular Mechanisms of Human Diseases I, (4) (Same as Pharmacology M252A.) Lecture, four hours. Preparation: prior satisfactory molecular biology coursework, Corequisite: course M252B. Fundamental concepts and methodologies in modern biology, with emphasis on implications and relevance to human disease and integration of biology with mechanisms underlying disease development and applications in therapy as they apply to cancer biology, infectious disease, and modern biological approaches. Letter grading.

M252B. Seminar: Molecular Mechanisms of Human Diseases II, (2) (Same as Pharmacology M252B.) Seminar, two hours. Prerequisite: course M252A. Reading, review, and discussion of primary research literature addressing fundamental concepts and methodologies in modern biology, with particular emphasis on implications and relevance to human diseases of topics presented in course M252A. Letter grading.


M262A. Seminar: Molecular Mechanisms of Human Diseases II, (2) (Same as Pharmacology M262A.) Seminar, two hours. Prerequisite: course M262A. Reading, review, and discussion of primary research literature addressing fundamental concepts and methodologies in modern biology, with particular emphasis on implications and relevance to human diseases of topics presented in course M252A. Letter grading.

M286. Neurophysics: Brain-Mind Problem, (4) (Same as Physics CM286.) Lecture, three hours; discussion, one hour. Prerequisites: Chemistry 14A or 20A, Mathematics 3A, 3B, 3C, 31A, 32A, 32B, 33A, Physics 1A, 1B, 1C, 4A, 4B, 6A, 6B, 6C. How mind emerges from brain? Provides summary of basic biophysics of neurons, synapses, and plasticity. Introduction to common experimental and theoretical techniques of measuring, quantifying, and modeling neural activity, and their relative strengths and weaknesses. Use these tools to understand link between neural circuits, their emergent neural dynamics, and behavior in example model systems. Discussion of mechanisms of interaction between neural circuits and their role in cognition, learning, and sleep. Computer laboratory component where students learn to write simple codes to quantify neural activity patterns. S/U or letter grading.

290A-290B-290C. Tutorials, (4 to 10) Tutorial, to be arranged. May be repeated for credit. S/U or letter grading.

595. Directed Individual Study or Research, (2 to 10) Tutorial, to be arranged. May be repeated for credit. S/U or letter grading.

Research for PhD Qualifying Examinations. (2 to 10) Tutorial, to be arranged. May not be applied toward PhD course requirements. May be repeated for credit. S/U grading.

599. Research for PhD Dissertation, (2 to 10) Tutorial, to be arranged. May not be applied toward PhD course requirements. May be repeated for credit. S/U grading.

Molecular Toxicology

Interdepartmental Program

Jonathan and Karin Fielding School of Public Health

56-070 Center for Health Sciences
Box 951772
Los Angeles, CA 90095-1772
310-206-1619
rgreenberg@ph.ucla.edu
http://moltox.ph.ucla.edu

Oliver Hankinson, PhD, Chair

Faculty Committee

Patrick Allard, PhD. (Environmental Health Sciences, Society and Genetics)
Jesus A. Araujo, MD, PhD (Environmental Health Sciences, Medicine)
Michael D. Collins, PhD (Environmental Health Sciences)
Oliver Hankinson, PhD (Pathology and Laboratory Medicine)
Shaly Mahendra, PhD (Civil and Environmental Engineering)
Robert H. Schiestl, PhD (Environmental Health Sciences, Pathology and Laboratory Medicine, Radiation Oncology)

Scope and Objectives

Faculty from 15 departments and schools at UCLA, including Chemistry and Biochemistry, Environmental Health Sciences, Epidemiology, Medicine, Molecular and Medical Pharmacology, and Pathology and Laboratory Medicine, have joined forces to create an interdisciplinary PhD program in Molecular Toxicology that is administered through the Fielding School of Public Health.

Specialties within the program include, but are not limited to, neurotoxicology, developmental toxicology, genetic toxicology, and carcinogenesis. There is a particular emphasis on mechanisms of toxicity, since it is now widely accepted that understanding mechanisms will provide the means for accurately determining risk.

New chemicals have been the basis for most of the technological developments during the
past century, and there is no question that soci-
yety has reaped enormous benefits from the
creation and growth of the chemical industry.
However, major health and environmental
problems have also been the legacy of the
synthesis of new chemical species. The disci-
pline of toxicology, which seeks to character-
ize and elucidate the mechanisms of the problems
related to exposure of chemical agents, has
also developed from a purely descriptive to a
mechanistic science whose objective is to un-
derstand the basis of toxic action, predict the
toxicity of new chemical entities, and protect
organisms from them. Toxicology has used the
basic disciplines of chemistry, biochemistry,
and cell biology to advance understanding of
toxicological phenomena, and the growth of
the sophistication of toxicology has paralleled
the increase in knowledge derived from the ba-
sic chemical and biological sciences.

Graduate Study
Official, specific degree requirements are de-
tailed in Program Requirements for UCLA
Graduate Degrees, available at the Graduate
Division website. In many cases, more detailed
guidelines may be outlined in announcements,
other publications, and websites of the
schools, departments, and programs.

Graduate Degree
The Molecular Toxicology Program offers the
Doctor of Philosophy (PhD) degree in Molecu-
lar Toxicology.

Molecular Toxicology

Upper-Division Courses
M110A. Drugs: Mechanisms, Uses, and Misuse. (4) (Same as Pharmacology M110A.) Lecture, four
hours (seven weeks); discussion, four hours (three
weeks). Requisites: Life Sciences 2, 3. Introduction to
pharmacology and toxicology for undergraduate stu-
dents. Examining drug development and mecha-
nisms of action of drugs and toxic agents. Letter
grading.

197. Individual Studies in Molecular Toxicology. (2
to 4) Tutorial, four hours. Limited to juniors/seniors.
Individual intensive study, with scheduled meetings to
be arranged between faculty member and student.
Assigned reading and tangible evidence of mastery of
subject matter required. May be repeated for credit.
Individual contract required. P/NP or letter grading.

Graduate Courses
211A-211B-211C. Molecular Toxicology Seminars.
(1-1-1) Seminar, one hour twice per month. Seminar
series which alternately features outside speakers and
members of UCLA molecular toxicology commu-
nity (students, postdoctoral fellows, and faculty) and
deals with topics relevant to molecular toxicology. In
Progress (211A, 211B) and S/U (211C) grading.

M241. Introduction to Chemical Pharmacology and
Toxicology. (6) (Same as Pharmacology M241.) Lecture, six hours. Preparation: organic and biological
chemistry. Designed for molecular and medical phar-
cology students. Introduction to general principles of
pharmacology. Role of chemical properties of
drugs in their distribution, metabolism, excretion,
and modes of action. S/U or letter grading.

M242. Toxicodynamics. (2) (Same as Environmental
Health Sciences M242.) Lecture, one hour; discus-
sion, one hour. Preparation: undergraduate biology
and chemistry courses. Requisite: Environmental
Health Sciences C240. Examination of recent litera-
ture on mechanisms of toxicity or toxicodynamics.
Student presentation of papers selected by instructor
on various aspects of toxic mechanisms, including
free radical mechanisms, mechanisms of cell death,
metal toxicity/iron homeostasis, intracellular pH and
calcium regulation, stress and adaptive pathways,
DNA repair/mutagenesis, carcinogenesis, and terato-
genesis. Discussion of various papers. S/U or letter
grading.

M247. Advanced Concepts in Gene-Environment
Interactions. (4) (Same as Environmental Health Sci-
cences M241.) Lecture, three hours; discussion, one
hour. Comprehensive and practical examination of
emerging science of gene-environment interaction.
Discussion of primary components of field, including
role of metabolic pathways in modifying environ-
mental responses and importance of environmental
influences in human disease. Exploration of selected
hot topics in field, such as importance of epigenetics
and of microbiome. S/U or letter grading.

296A-296B. Research Topics in Molecular Toxicol-
ogy. (2 each) Research group meeting, two hours.
Advanced study and analysis of current topics in mo-
lecular toxicology. Discussion of current research and
literature in research specialty of faculty member
teaching course. S/U grading: 296A. Chemical Toxi-
cology. 296B. Molecular Carcinogenesis. 296C. Ter-
togenesis. 296D. Molecular Topics in Boron Biology.
296E. Germ Cell Cytogenetic/Genetic Biomarkers.
296F. Genetic Toxicology. Laboratory Analysis.

375. Teaching Apprentice Practicum. (1 to 4) Sem-
in, to be arranged. Preparation: apprentice per-
nonal employment as teaching assistant, associate,
or fellow. Teaching apprenticeship under active guid-
ance and supervision of regular faculty member re-
sponsible for curriculum and instruction at UCLA.
May be repeated for credit. S/U grading.

596. Directed Individual Study or Research. (2 to
12) Tutorial, to be arranged. Individual guided studies
derived from faculty supervision. May not be applied
toward degree course requirements. May be repeated
for credit. S/U or letter grading.

597. Preparation for PhD Qualifying Examinations.
(2 to 12) Tutorial, four hours. May not be applied
toward degree course requirements. May be repeated
for credit. S/U grading.

599. PhD Dissertation Research. (8 to 12) Tutorial,
to be arranged. May not be applied toward degree
course requirements. May be repeated for credit. S/U
grading.

MUSIC

Herb Alpert School of Music
2539 Schoenberg Music Building
Box 951616
Los Angeles, CA 90095-1616
310-825-4761
https://www.music.ucla.edu

Heal N. Stulberg, MA, Chair

Professors
James K. Bass, DMA
Kenneth E. Burrell, BA
Lily Chen-Haftek, PhD
Vladimir Chernov, MM
Michael E. Dean, MM
Inna Faliks, DMA
Juliana K. Gondek, MM
Gary G. Gray, MM
Gordon Henderson, MME
Peter D. Kazaras, JD
Ian Krouse, DMA
David S. Lefkowitz, PhD
Elisabeth C. Le Guin, PhD
Jens H. Lindemann, MM
Antonio Lysy
Moses Pogossian, DMA
Heal N. Stulberg, MA
Guillaume B. Sutre, MM
Robert S. Winter, PhD (President of Music
and Interactive Arts)

Professors Emeriti
Elaine R. Barkin, PhD
Roger Bourland, PhD
Paul S. Chinara, PhD
Maurice Gerow, PhD
Frederick F. Hammond, PhD
Thomas F. Harmon, PhD
Mark Kaplan, BA
D. Thomas Lee, DMA
Susan K. McClary, PhD
Donald Neuen, MA
Paul V. Reale, PhD
Jon Robertson, DMA
Robert Walser, PhD

Associate Professors
Travis J. Cross, DMA
Frank Heuser, PhD

Assistant Professor
Jocelyn H. Ho, DMA

Senior Lecturers SOE
John L. Hall, MM, Emeritus
Sheridon W. Stokes, Emeritus

Lecturer SOE
Maureen D. Hooper, EdD, Emerita

Lecturers
David A. Brennan, DMA
Bruce H. Broughton
Raynor O. Carroll
Gloria C. Cheng
Richard D. Danielpour, DMA
Jonathan D. Davis, DMA
Theresa A. Dimond, DMA
Margaret M. Flanagan Lysy
Aubrey D. Foard, MM
Peter R. Golub, PhD
Rakel R. Hak, MM
Jeffrey J. Kryka, PhD
James D. Lent, DMA
Noah G. Metles, DMA
James T. Miller, MM
Lou Anne Neill, MA
Hiltomi M. Oba, MA
Benjamin J. Phelps, PhD
Jean-Louis Rodrigue
Peter Rutenberg
Amy M. Sanchez, MM
David A. Schurr, PhD
John A. Steimmetz, MA

Adjunct Professors
Christoph Bull, DMA
Mark C. Carlson, PhD
Don E. Franzen
Herbert J. Hancock
Christopher Hanulik, BM
Jennifer Judkins, PhD
Richard D. Danielpour, DMA
Peter Rutenberg
Aubrey D. Foard, MM

Adjunct Associate Professor
Peter F. Yates, DMA

Scope and Objectives
The Department of Music provides undergradu-
ate and graduate training in Western classical
music, with concentrations in composition,
music education, and performance. Jazz per-
formance is also offered at the graduate level.
The department is aligned with the Depart-
ments of Ethnomusicology and Musicology
and aspires to promote productive collabora-
tion between performance and scholarship, a
cross-cultural global understanding of the art
of music, and preparatory training for a broad
range of careers in music after students graduate.

The four-year Bachelor of Arts curriculum in Music is a classically oriented, balanced program of practical, theoretical, and historical studies, with related performance and academic studies in non-Western music. The major, designed for students who want to combine fine musicianship with academic excellence, is based on a core curriculum of music theory, history, analysis, and individual and group performance. Given in the context of a liberal education, this provides a foundation for an academic or professional career and affords valuable cultural background.

At the graduate level, specialized studies leading to the degrees of Master of Arts and Doctor of Philosophy are offered in composition; specialized studies leading to the degrees of Master of Music and Doctor of Musical Arts are offered in all classical solo instruments, voice, collaborative piano, and conducting. Jazz performance is offered at the master's degree level.

Students interested in a concentration in music history and literature should consider the majors in Music History and Musicology, and those interested in a concentration in world music should consider the major in Ethnomusicology.

### Undergraduate Study

The Music major is a designated capstone major. Students learn about the real world with respect to putting on concerts. Through preparation for and execution of their senior recitals, students demonstrate a level of proficiency appropriate for their role in the recitals and their understanding of performance practices appropriate to the repertory being performed, as acquired in previous coursework and through research. Students also display their ability to assemble an effective program in terms of pacing and variety and demonstrate requisite stage presence along with an ability to communicate with their audience in performance.

### Music BA

#### Capstone Major

**Admission**

For new and change of major applicants, each concentration within the department has its own specific requirements for admission. Applicants to the composition concentration must submit a portfolio of compositions prior to the required audition and interview with the composition theory faculty. Applicants to the music education concentration are required to audition in their primary performance medium and interview with the music education faculty. Applicants to the performance concentration are required to audition in their principal performing medium with members of the performance faculty. Admission to the theory concentration is open only to junior/senior music majors on the basis of an interview with the composition theory faculty.

### Preparation for the Major

All entering freshmen are required to take the Music Theory Assessment Examination either during New Student Orientation or during zero week of fall quarter. The examination score is used to determine eligibility and placement in first-year music core courses (Music M6A, M6B, M6C and 20A, 20B, 20C). Examination results may require enrollment in Music 3 as a requisite to both courses M6A and 20A. Entering transfer students with fewer than 15 units of prior music theory must take the Music Theory Assessment Examination.

**Composition:** Music M6A, M6B, M6C, with grades of C– or better, 20A, 20B, 20C, with grades of C or better, 12 units from courses 60A through 65, 6 units from course 86, and two years (12 units) of performance organizations utilizing students’ major instruments (courses C90A through 90N and C90Q through 90S), as assigned by the chair or designated faculty member. In addition, students are required to take one college year—or at least one course at level three—of French, German, Italian, or Spanish, which may be used to fulfill the school language requirement.

**Music Education:** Music M6A, M6B, M6C, with grades of C– or better, 20A, 20B, 20C, with grades of C or better, 12 units from courses 60A through 65, and three years (18 units) of performance organizations utilizing students’ major instruments (courses C90A through 90N and C90Q through 90S), as assigned by the chair or designated faculty member. In addition, students are required to take one college year—or at least one course at level three—of French, German, Italian, or Spanish, which may be used to fulfill the school language requirement.

**Performance:** Music M6A, M6B, M6C, with grades of C– or better, 20A, 20B, 20C, with grades of C or better, 12 units from courses 60A through 65, and two years (12 units) of performance organizations utilizing students’ major instruments (courses C90A through 90N and C90Q through 90S), as assigned by the chair or designated faculty member. Voice students are also required to complete courses 74A, 74B, and 74C (6 units). In addition, students are required to take one college year—or at least one course at level three—of French, German, Italian, or Spanish, which may be used to fulfill the school language requirement.

**Music Education:** A minimum of 41 upper-division units, including Music 110A through 110D, 114A, 114B, 115A, 115B, 116, 117, 119A, 119B, 119C, and three courses from 160A through 165. During each term in which students take private lessons, they must participate in a performance organization for a letter grade, utilizing their major instruments (courses C90A through 90N and C90Q through 90S), as assigned by the chair or designated faculty member. A capstone senior recital, that may be held as early as fall quarter of the junior year, is also required.

**Performance:** Twelve units in performance instruction from Music 160A through 165 (including junior and senior recital requirements), 4 units of chamber ensembles (course C175) for instrumental performance students, 4 units of course C158 for vocal performance students, and 8 elective units selected from any upper-division ethnomusicology, music, or music history courses. During each term in which students take private lessons, they must participate in a performance organization for a letter grade, utilizing their major instruments (courses C90A through 90N and C90Q through 90S), as assigned by the chair or designated faculty member.

**Theory:** Six courses selected in consultation with a faculty adviser.

### Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

### Graduate Degrees

The Department of Music offers the Master of Music (MM) degree, Doctor of Musical Arts (DMA) degree, and Master of Arts (MA) Concentration in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Music.

### Music Lower-Division Courses

1A-1B. Fundamentals of Music. (4-4) Lecture, three hours; discussion, two hours. Designed for nonmusic majors. P/NP or letter grading. 1A, Introduction to elements of music: pitch and rhythm symbols, meter and time signatures, notation, scales, intervals, and chord structure. 1B. Requisite: course 1A. Diatonic harmony; four-part writing, including inversions, seventh, secondary dominants, and modulation; organization of melody and accompaniment; simple analysis; sight-singing and ear training.

3. Preparatory Music Theory. (4) Lecture, four hours; laboratory, one hour. Course in music fundamentals, including musicianship, theory, and terminology. Letter grading.

4A-4B-4C. Basic Musicianship. (2-2-2) Studio, three hours. Class instruction in elementary ear training and keyboard skills. P/NP or letter grading.

5. Beginning Voice Class. (2) Studio, four hours; outside practice and preparation, two hours. Not open to voice majors. Correct singing techniques, including vocal mechanism, posture and breathing, musical warm-ups, optimal vocal production, diction, and performance delivery to be put into practice in...
7. Understanding Movie Music. (4) Lecture, four hours; outside study, eight hours. Musical experience helpful, but not required. Brief historical survey of film music, with strong emphasis on recent development: Japanese animation, advertising, and MTV, as well as computer tools and digital scoring methods. Design or choose those interested in movie music. Offered in summer only. P/NP or letter grading.

8G. Graduate Piano Sight-Reading. (2) Studio, two hours. Limited to graduate students. Designed to help enter graduate students remedy entrance deficiencies, to be cleared by examination. May be repeated. S/U grading.

15. Art of Listening. (5) Lecture, three hours; discussion, one hour; outside study, 11 hours. Acquisition of listening skills through direct interaction with live-performance, performers, and composers. Relationship of listening to theoretical, analytical, historical, and cultural frameworks. May as aesthetic experience and cultural practice. P/NP or letter grading.

16. Hollywood Musical and American Dream. (4) Lecture, three hours; discussion, one hour. Examination of composers, writers, and filmmakers whose creative efforts showed how change was coming to American culture through the movie musical. Flat features and music clips illustrate American life as seen through Hollywood musicals. P/NP or letter grading.

20A. Music Theory I. (3) Lecture, four hours. Preparation: passing score on departmental examination. Course M6A is required, or M6B, which is enforced requisite to M6C. Students must receive grade of C- or better to proceed to next course in sequence. Introduction to music musicianship through in-depth exploration of basic common musical elements and training in auditory discrimination and development of keyboard skills. Focus on topics such as tonal and modal harmony, rhythm, improvisation, composition, notation, and ear training to prepare students for later theory courses, participation in music ensembles, advanced study in music, and professional careers. Letter grading.

M6A-M6B-M6C. Introduction to Musicianship. (2-2-2) (Same as Ethnomusicology M6A-M6B-M6C and Music History M6A-M6B-M6C) Laboratory, four hours. Preparation: placement examination. Course M6A is enforced requisite to M6B, which is enforced requisite to M6C. Students must receive grade of C- or better to proceed to next course in sequence. Introduction to music musicianship through in-depth exploration of basic common musical elements and training in auditory discrimination and development of keyboard skills. Focus on topics such as tonal and modal harmony, rhythm, improvisation, composition, notation, and ear training to prepare students for later theory courses, participation in music ensembles, advanced study in music, and professional careers. Letter grading.

Letter grading.
Upper-Division Courses

100A-100B-100C. Music in American Education. (4-4-4) Lecture, four hours; laboratory, one hour. Req- uisites: courses 20A, 20B, 20C, 116, 120A, 120B, 120C. Critically examines analysis of philosophical, histor- ical, organization, curriculum, and literature of music programs for elementary and secondary schools in American education. Each course may be taken inde- pendently for credit. Letter grading. 100A. General Music. 100B. Choral Music. 100C. Instrumental Music.

104A. Modal Counterpoint. (3) Lecture, three hours. Requisite: course 120C (accelerated section). In-depth exploration of styles and techniques of counterpoint of 15th and 16th centuries through writing and analysis of important forms of period, including species, canon, free counterpoint, canons, figured bass, point of imitation, motet, ricercar, etc. Letter grading.

104B. Special Topics in Counterpoint. (3) Lecture, three hours. Requisite: course 120C (accelerated section). In-depth exploration of polyphonic styles and textures since 1750, with emphasis on late-19th- and 20th-century modes of expression, through writing and analysis. Letter grading.

106A. Orchestration I. (4) Discussion, three hours. Requisites: courses 120C (accelerated section), 123C. Rigorous study of orchestration, with exercises in scoring. P/NP or letter grading.

106B. Orchestration II. (4) Discussion, three hours. Requisites: courses 106A, 120C (accelerated section), 123C. Scoring and analysis for ensembles and full orchestral music. Letter grading.

110A. Learning Approaches in Music Education. (4) (Formerly numbered 110B) Lecture, two hours; ac- tivity, two hours; outside study, eight hours. Enforced requisite: course 20A. Introduction to music educa- tion by development of concepts, attitudes, and skills necessary to teach music and philosophical, histori- cal, cultural, and psychological foundations of music education courses. Focus on emphasis on teaching theories and psychology of music learning. Contextualization of concepts by engaging in nonnotational modes of music learning, including systematic aural transmis- sion and informal learning. Letter grading.

110B. Musicality and Creativity in Childhood. (4) Lecture, two hours; activity, two hours; outside study, eight hours. Enforced requisites: courses 20A, 20B, 20C, 110A, 120A, 120B, 120C. Preparation of music education students for teaching music at preschool and elementary school levels. Development of under- standing of developmental characteristics, diverse cultures, and learning needs of children and design of effective instructional strategies that are age-approp- riate and responsive to children's background. Focus on practice of student-centered curriculum where students are active learners and teachers are facilitators to become proficient in providing children with music learning environment that is conducive to optimal growth in their musicality and creativity. Letter grading.

110C. Comparative Study of Choral Music Educa- tion. (4) Lecture, two hours; activity, one hour; field- work, one hour; outside study, eight hours. Enforced requisites: courses 20A, 20B, 20C, 110A, 119A, 120A, 120B, 120C. Preparation of students for teaching choral music at middle and high school levels. Devel- opment of understanding of a variety of choral charac- teristics, diverse cultures, and learning needs of ado- lescents and design of effective instructional strate- gies that are age-appropriate and responsive to students’ backgrounds. Letter grading.

111A. Technology in Music Education I. (1) Labora- tory, three hours. Requisite or corequisite: course 20A. Provides music educators and music in- knowledge necessary to use appropriate computer hard- ware and software for purposes of music sequencing, arranging, and scoring, with emphasis on applications that are appropriate for use in public and/or private schools for levels K-12 and higher education. Activi- ties include familiarization with computer systems and software, computer-assisted music notation and publication, and content design of basis sequencing techniques. Letter grading.

111B. Technology in Music Education II. (1) Labora- tory, three hours. Requisite: course 111A. Introduc- tion to instructional uses of computers in music class- rooms, with emphasis on practical information neces- sary to intelligently purchase and implement microcomputers in schools, including training in ar- rangment, multimedia production, and classroom in- struction techniques. Additional topics include teacher-based administrative functions (grading, communications, research, databases, financial man- agement). Letter grading.

112. Guided Field Experiences in Music Education. (1) Field studies, three hours. Initial field experiences for students preparing to teach and earn single sub- ject certification in music. Novice teachers work under the guidance of music education faculty members and participate with public music school teacher-to- teacher and deliver instruction in K-12 settings. P/NP grading.


115A-115B. Study of Instrumental Techniques. (2- 2) Studio, four hours; outside study, two hours. Ap- plied studies in basic performance techniques and tut- orial materials designed to give music education stu- dents knowledge to teach basic instrumental concepts. Letter grading. 115A. Woodwinds. 115B. Brass.

116. Introduction to Conducting. (2) Lecture, three hours. Requisites: courses 20A, 20B, 20C. Functions of conducting, including basic skills, tech- niques, analysis, and repertoire. P/NP or letter grading.

117. Study and Conducting of Instrumental and Choral Literature. (2) Lecture, three hours. Requisite: course 116. Study and practice of conducting both instrumental and choral repertoire. In addition to fur- ther development of conducting gestures, focus on score study techniques, rehearsal techniques, style, and interpretation as applied to choral and instru- mental repertoire. Letter grading.

118A. Advanced Choral Conducting. (2) Lecture, one hour; studio, two hours. Requisites: courses 116, 117. Conducting basics, baton technique, beat pat- terns, dynamics, score preparation and analysis. May be repeated once for credit. Concurrently scheduled with course C218B. P/NP or letter grading.

118B. Choral Techniques and Methods. (2) Lec- ture, one hour; studio, two hours. Requisites: courses 116, 117, C118A. Vocal and choral pedagogy, vocaliz- ing and warm-up techniques, diction, and rehearsal and audition techniques. May be repeated once for credit. Concurrently scheduled with course C218B. P/NP or letter grading.

119A. Vocal Techniques for Music Education. (3) (Formerly numbered 119I) Activity, two hours, outside study, five hours. Introduction to art of teaching voice, including anatomy of singing in- strument, biomechanics of singing, diagnosis and correction of faults, heightened awareness of voice tech- nical, cultural, and psychological foundations of music. Analysis and interpretation as applied to vocal tech- niques to choral music teaching at middle and high school levels. Letter grading.

119B. Western and World Percussion Pedagogy. (3) Lecture, two hours; activity, two hours; outside study, five hours. Enforced requisites: courses 20A, 20B, 20C, 110A. Applied studies in basic perfor- mance techniques and tutorial materials designed to give music education students knowledge to teach essential instrument concepts. Topics include snare drum technique, mallets, timpani, accessories, per- cussion ensembles, introduction to drum set and world percussion. Letter grading.

119C. Jazz and Technology Pedagogy. (3) Lecture, two hours; activity, two hours; outside study, five hours. Enforced requisites: courses 20A, 20B, 20C, 110A, 120A, 120B, 120C. Foundations for teaching jazz and development of understanding of curriculum, rehearsal techniques, improvisation, and uses of technology in jazz education. Technology under- standing includes basic concepts of sequencing, composition, ensemble performance, and creation of multimedia presentations using tablet (iPad) tech- nology. Letter grading.

120A. Music Theory IV. (4) Lecture, four hours, dis- cussion, four hours. Preparation; passing score on departamental first-year examination. Requisite: course 20C with grade of C (2.0) or better. Theory: ba- roque counterpoint including choral Prelude; two- part invention; exposition and first modulation of three-part invention; canon; principles of analysis; in- versions, canons, and fugues. Musicianship: sight- singing of extended chromatic melodies; advanced harmonic dictation; diatonic and chromatic; keyboard harmonization of modulating melodies; elementary score reading. P/NP or letter grading.

120B. Music Theory V. (4) Lecture, four hours, dis- cussion, four hours. Requisite: course 120A with grade of C (2.0) or better. Theory: advanced chro- matic harmony including development of harmony from 1850; analytical projects; style composition. Mu- sicianship: advanced score reading; advanced har- monic dictation; preparation for departmental exam- ination. P/NP or letter grading.

120C. Music Theory VI. (4) Lecture, four hours, dis- cussion, two hours; listening, two hours. Requisite: course 120B with grade of C (2.0) or better. 20th-cen- tury harmonic language; atonal and polytonal musi- cism, polytonality, free atonality, serialism, and mini- malism. P/NP or letter grading.
121. Special Topics in 20th-Century Music. (4) Lecture, three hours. Requisites: courses 20A, 20B, 20C, 120A, 120B, 120C. In-depth study of certain aspects of 20th-century music ranging from individual composers and schools to ideological or stylistic concerns. May be repeated once for credit. P/NP or letter grading.

C12, Speculative Music Theory. (4) Discussion, three hours. Requisites: courses 20A, 20B, 20C, 120A, 120B, 120C. Techniques of tonal coherence study, formal analysis and compositional exercises in styles of given periods. May be repeated once for credit. May be concurrently scheduled with course C222. P/NP or letter grading.

123A-123B-123C. Composition. (4-4-4) Lecture, three hours. Requisites: courses 20A, 20B, 20C, 120A, 120B, 120C. Course 123A is requisite to 123B, which is requisite to 123C. Designed for composition students. Vocal and instrumental composition in smaller forms, including style composition and 20th-century techniques. Each course may be repeated once for credit, but first year must be taken in sequence. P/NP or letter grading.


124B. Scoring for Wind Ensemble. (4) Discussion, three hours. Requisites: courses 106B, 120C (accelerated section), 123C. Practical applications in scoring for large wind ensembles, including a capella as well as chorus with instruments. Preparation and production of score and parts. At least one reading by UCLA Chorale or other choral group scheduled. Letter grading.

M131. Development of Latin Jazz, (4) (Same as Ethnomusicology M131.) Lecture, four hours; discussion, one hour. Survey of historical and stylistic development of musical style referred to today as Latin jazz, by examining music to the present day. Letter grading.

M134. Introduction to Armenian Music, (4) (Same as Armenian M134 and Ethnomusicology M134.) Lecture, three hours. Some amount of formal music study and experience as vocalist or instrumentalist desirable. Introduction to history, tradition, and scope of music of Armenia. Focus on number of different genres and approaches, and interactions between music and culture, society, and history. P/NP or letter grading.

136A-136B-136C. Historical Survey of Music Theater, (4-4-4) Lecture, four hours; discussion, one hour. Historical survey of major works from music theater, tracking development of art form from its European beginning to American music theater of today. P/NP or letter grading. 136A. Early Forms to 1900. 136B. 1900 to 1945. 136C. 1945 to 1975.

140A-140B-140C. History and Analysis of Western Music. (4-4-4) Lecture, four hours; discussion, one hour. Survey of Western music; examination of repertory in three centuries. Course for pianists and instrumentalists. Activities include weekly score preparation, weekly rehearsals, regular coaching, and performances for lessons, juries, recitals, master classes, and other academic activities. Regular coaching with faculty members, weekly performance workshop, and rehearsals. Concurrently scheduled with course C222. P/NP or letter grading.

C158, Advanced Vocal Repertoire, Dictation, and Interpretation. (2) Activity, two hours; outside study, four hours. Enforced requisite: course 74C. Performance-based course that develops repertoire and experiences in collaborative performance for pianists and vocalists. Activities include text and score preparation, dictation, weekly rehearsals, regular coaching, and performances for lessons, juries, recitals, master classes, and other related activities. Intensive study developed. Regular coaching with faculty members, weekly performance classes, and rehearsals. Concurrently scheduled with course C458. P/NP or letter grading.


C167, Selected Topics in Keyboard Literature. (2) Lecture, two hours. Enforced corequisite: one course from 64A, 64B, 64C, 164A, 164B, or 164C. In-depth study of selected topics in keyboard literature, concentration on problems of performance through analysis, historical and comparative studies, and actual performances by participants. May be concurrently scheduled with course C267. P/NP or letter grading. 174. Vocal Diction, (2) Lecture, two hours; outside study, four hours. Taught for music majors. Sounds of language as applied to singing, including use of International Phonetic Alphabet, translation of art song texts, and application to student’s current vocal repertoire. Background in each language encouraged. P/NP or letter grading.

C175, Chamber Ensembles. (2) Activity, two hours. Preparation: audition. Students must be at advanced level. Applied course. Limited to students with proficiency in advanced level of performance. Concurrently scheduled with course C485. P/NP or letter grading.


C177. Quack Chamber Ensembles. (2) Studio, two hours. Preparation: permission of participating chamber ensemble who, after rehearsing and being coached on core amount of repertoire, play in outreach settings around Los Angeles community. May be repeated for credit. May be concurrently scheduled with course C226. P/NP or letter grading.

CM182. Music Industry, (4) (Same as Ethnomusicology CM182, Music History CM186, and Music Industry CM187.) Lecture, four hours; discussion, one hour; outside study, seven hours. Limited to Ethnomusicology, Music, and Music History majors. Examination of influence of music industry on way music is created, performed, listened to, evaluated, and used today. Historical approach taken, beginning with music published in 18th century and continuing through development of audio recordings to MTV and popular music today. Concurrently scheduled with course CM282. Letter grading.

C185. Historical and Philosophical Foundations of Music Education. (4) Lecture, three hours. Preparation: completion of undergraduate music education specialization. Development of music education in U.S. according to established schools of thought. May be concurrently scheduled with course CM225. P/NP or letter grading.

188. Special Courses in Music. (2) Lecture, three hours. Outside study, nine hours. Special topics in music for undergraduate students taught on experimental or temporary basis. May be repeated for credit. P/NP or letter grading.

195. Community or Corporate Internships in Music. (2 or 4) Tutorial, six hours. Limited to juniors/se-niors. Internship in supervised setting in community agency or business. Students meet on regular basis with supervising instructor and submit periodic reports of their work experiences. May be repeated for maximum of 8 units. Individual contract with supervising faculty member required. P/NP or letter grading.

Graduate Courses

M201. Repertory and Analysis. (2) (Same as Musicology M201.) Seminar, two hours. Requisite or corequisite: Musicology 200A. Exploration of defined repertory through readings and analysis. Specific topics vary. May be repeated for credit. S/U grading.

202. Analysis for Performers. (4) Lecture, three hours; outside study, nine hours. Designed for graduate students. Survey of analytical techniques and approaches required for professional performers, including chord progression, harmonic rhythm and prolongation, small and large forms, theories of musical coherence, and understanding of styles. Letter grading.

203. Notation and Performance. (4) Lecture, three hours; outside study, nine hours. Designed for graduate students. Survey of analytical techniques and approaches required for professional performers, including chord progression, harmonic rhythm and prolongation, small and large forms, theories of musical coherence, and understanding of styles. Letter grading.

204. Music Bibliography for Performers. (4) Lecture, three hours; outside study, nine hours. Designed for graduate music performance students. Survey of general bibliographic techniques in music, with emphasis on materials for performing musicians. Letter grading.

212, Electronic Musi-
C218A. Advanced Choral Conducting. (2) Lecture, one hour; studio, two hours. Requisites: courses 116, 117. Conducting basics, baton technique, beat patterns, dynamics, score preparation and analysis. May be repeated once for credit. Concurrently scheduled with course C118A. Vocal and choral pedagogy, vocalizing, emphasis on composition, rehearsal techniques, and audition techniques. May be repeated once for credit. Concurrently scheduled with course C118B. Letter grading.

C218B. Choral Techniques and Methods. (2) Lecture, one hour; studio, two hours. Requisites: courses 116, 117, C218A. Vocal and choral pedagogy, vocalizing, emphasis on composition, rehearsal techniques, and audition techniques. May be repeated once for credit. Concurrently scheduled with course C118B. Letter grading.

C222. Speculative Music Theory. (4) Discussion, three hours. Designed for graduate music students. Techniques of tonal coherence studied through analysis and compositional exercises in styles of given periods. May be repeated once for credit. May be concurrently scheduled with course C122. S/U or letter grading.

C225. Historical and Philosophical Foundations of Music Education. (4) Lecture, three hours. Designed for graduate students. Development of music education in U.S. according to established schools of thought. May be concurrently scheduled with course C185. Additional assignments, as well as evidence of greater depth of study, required of graduate students. S/U or letter grading.

C226. Electronic Music Composition. (4) Lecture, three hours; laboratory, three hours. Preparation: advanced experience and accomplishment in serious compositional work with various digital music technologies. Designed for graduate students. Limited enrollment. Exercises in electroacoustic orchestration, meta-pitch composition, notation software (Sibelius), sequencing and film scoring software (Logic), text collages (Pro-Tools), and final project. May be concurrently scheduled with course C176. S/U or letter grading.


C252. Seminar: Composition. (4) Seminar, three hours. Compositional projects for varying acoustic instrumental and vocal ensembles. Students expected to perform their compositions from sketches at piano and/or with other instrumentalists. Performance of completed works in graduate composition concerts by UCLA student performers. S/U or letter grading.


C254. Advanced Music Analysis: Pre-Tonal Music. (4) Seminar. Designed to provide graduate music composition students with in-depth exposure to complex and rich works of late Middle Ages through early 16th-century Baroque era. Analysis of analytical techniques and methods not commonly used in analysis of works of tonal and post-tonal periods, and approaches to musical structures used by composers before modern tonal harmonic syntax had fully developed. Letter grading.


C260A. Seminar: Motion Pictures and Television. (6) Seminar, three hours; laboratory, three hours. Practical experience in composing for commercial movies. Difference between underscore and source music; illusion of synchronous effect when they merge, as in MTV, dream sequences, or montages. Study of three principal areas of filmmaking—preproduction, production (shooting), and postproduction. Examples from classic movies and discussion of their scores. Composition of actual cues for acoustic instruments coordinated to picture to be term project. Separate cues involve dialogue, melodrama, comedy, chase, memory montage, and tension. Letter grading.

C260B. Seminar: Composition for Motion Pictures and Television. (6) Seminar, three hours; laboratory, three hours. Use of Orff Schulwerk approach to music instruction for children. Students who successfully complete each course are eligible for certification at that level through American Orff Schulwerk Association. May be repeated for credit without limitation. S/U or letter grading.

C261A. Historical and Philosophical Foundations of Music. (4) Seminar, three hours; outside study, nine hours. Limited to graduate performance students. Investigation of primary source readings in performance practice as related to period; analytical reports and practical applications in class demonstrations. May be repeated for credit. Letter grading. 261A. Medieval. 261B. Renaissance. 261C. Baroque. 261D. Classical. 261E. Romantic. 261F. Jazz.

C266. Graduate Instruction for Composition Specialists. (4) Studio, one hour arranged with instructor; outside study, 11 hours. Limited to graduate composition students. One-on-one composition lessons, with assignments and compositions tailored to each student’s progress and level of achievement, addressing counterpoint, voice-leading, harmonic and melodic construction, orchestration, form, texture, style, notation, and performance feasibility of compositions studied on at advanced level. Presentation of at least one composition composed during course in graduate composition concert during academic year. May be repeated for credit without limitation. S/U or letter grading.

C267. Selected Topics in Keyboard Literature. (2) Lecture, two hours. Enforced corequisite: course 146A or 146B or 146C. In-depth study of selected topics in keyboard literature, concentrating on problems of performance through analysis, historical and comparative studies, and actual performances by participants. May be concurrently scheduled with course C167. S/U or letter grading.

C270A-270G. Seminars: Music Education. (6 each) Seminar, two hours. Content and methods of music education for elementary, junior high, and high school levels. Topics include development of instructional techniques for violin, viola, cello, and bass; critical examination of current pedagogical materials; and reading sessions of recently published music for string orchestra. May be repeated for credit without limitation. Offered in summer only. S/U or letter grading.

C274. Effective and Creative String Teaching. (2) Lecture, 24 hours. Comprehensive course for teachers of string classes and string orchestras at elementary, junior high, and high school levels. Examination of this literature in reading and discussion sessions. May be repeated for credit without limitation. Offered in summer only. S/U or letter grading.

C275. Seminar on Art of Choral Music. (2) Lecture, 25 hours. Symposium on college, high school, and junior high school choral conducting. Identification of problems and development of practical techniques for solving real challenges in choral conducting and teaching. Topics include innovative choral methods, choral conducting, vocal pedagogy, voice classification, and survey of standard and current choral literature. Offered in summer only. S/U or letter grading.

C290. Introduction to Computer-Assisted Instruction of Music. (2) Lecture, three hours; laboratory, two hours. Introduction to instructional uses of computers in music classroom, with emphasis on practical information necessary to intelligently purchase and implement microcomputers in schools. Courseware is experienced and reviewed, jargon defined and illustrated, and practical hands-on experience obtained. May be repeated for credit without limitation. Offered in summer only. S/U or letter grading.

C345. Exploration of MIDI Computer Resources: Keyboards and Synthesizers. (2) Lecture, two hours; laboratory, three hours. Creative use of MIDI-based synthesizers under computer control. Exploration of available hardware resources and use of various software sequencing packages. Use of software for computer-based music printing. Hands-on experience. May be repeated for credit without limitation. Offered in summer only. S/U or letter grading.
371. Marching Band in Secondary Education. (2) Lecture, two hours. Study of contemporary marching band as component of music curriculum in secondary education, including current approaches, practices, and problems associated with marching bands, as well as historical perspective. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

401. New Music Forum. (2) Tutorial/laboratory, two hours outside study, one year of graduate study in music at UCLA. Interactive course in preparation and performance of premiere works especially composed for graduate performer or performers by graduate composer at UCLA. Letter grading.

C450. Keyboard Skills for Pianists. (2) Activity, two hours; outside study, four hours. Applied music course with focus on necessary skills for piano performance. Areas include sight playing, score reading, transcription, finger coordination, and preparation of solo literature in music at UCLA. Letter grading.

C455. Instrumental and Piano Duo Repertoire. (2) Activity, two hours; outside study, four hours. Performance-based course that develops repertoire and experience in collaborative performance for pianists and instrumentalists. Activities include weekly studio preparation, weekly rehearsals, regular coaching, and performances for lessons, juries, recitals, master classes, and other related activities. Regular coaching with faculty members, weekly performance workshops, and rehearsals. Concurrently scheduled with course C150. Letter grading.

C458. Advanced Vocal Repertoire, Diction, and Interpretation. (2) Activity, two hours; outside study, four hours. Performance-based course that develops repertoire and experience in collaborative performance for pianists and vocalists. Activities include text and score preparation, diction, weekly rehearsals, regular coaching, and performances for lessons, juries, recitals, master classes, and other related activities. Intensive diction study incorporated. Regular coaching with faculty members, weekly performance class, and rehearsals. Concurrently scheduled with course C155. Letter grading.


469. Instrumental Pedagogy. (4) Lecture, three hours; outside study and preparation, nine hours. Preparation of proficiency on one music instrument. Designed for graduate music students. Study of art of teaching musical instruments, including discussions of philosophy of teaching, learning, and teaching of musical interrelationships. Individualized study of various considerations, such as physical/technical aspects and pedagogical repertoire, peculiar to teaching student’s primary instrument. Letter grading.

470. Opera Studio for Graduate Students. (4) Laboratory, six hours. Designed for graduate students. Performance techniques and repertoire for graduate students in opera. S/U or letter grading.

471. Vocal Pedagogy. (4) Lecture, three hours; discussion, four hours; practical work; advanced proficiency in voice. Designed for graduate music students. Study of teaching techniques for voice, including thorough investigation of vocal mechanism and its use, plus study of noted teachers of past and present. Further emphasis on practical teaching experience in class. Letter grading.

472. Master Class in Opera. (6) Studio, three hours; outside study, 15 hours. Limited to graduate performance students. Intensive study and preparation of opera literature. May be repeated for credit. S/U or letter grading.

475. Master Class in Conducting. (6) Studio, three hours; outside study, 15 hours. Limited to graduate performance students. Advanced chamber ensembles who, after rehearsing and being coached on core amount of repertoire, play in outreach settings around Los Angeles community. May be repeated for credit without limitation. Concurrently scheduled with course C177. S/U grading.

480. UCLA Chorale. (2) Activity, four hours. Preparation: audition. Designed for MM and DMA students. Selected ensemble of 60 voices performing choral music weekly. Preparation: appointment ensemble, with emphasis on music after 1700. May be repeated for credit without limitation. May be concurrently scheduled with course C90A. Letter grading.

C481. Symphony Orchestra. (2) Activity, four hours. Preparation: audition. Group performance of symphonic literature, as well as orchestral accompaniment for operatic and major choral works. May be repeated for credit without limitation. May be concurrently scheduled with course C90E. Letter grading.


C484. Piano/Keyboard Accompanying. (2) Activity, four hours; outside study, two hours. Collaboration with large ensembles, instrumentalists, and/or vocalists in role of accompanists. Performance includes, but is not limited to, lessons, rehearsals, special studio performance projects, master classes, concerts, auditions, juries, and recitals. May be repeated for credit without limitation. May be concurrently scheduled with course C90G. Letter grading.


C486. Chorus Ensembles. (2) Activity, two to four hours. Preparation: audition. Students must be at advanced level of their instrument to participate. Applied study of performance practices of literature appropriate to ensembles. Students may enroll in two sections per term; total of 12 units may be applied toward degree requirements. May be concurrently scheduled with course C175. Letter grading.


495. Introductory Practicum for Teaching Apprentices in Music. (2) Weekly eight-hour-two-hour seminar sessions, plus intensive training session during Fall Quarter. Lecture and workshop. May be repeated as teaching apprentice in Music Department. Required of all new teaching apprentices. Special course dealing with problems and practices of teaching music at college level. May not be applied toward degree requirements. S/U grading.

496. Technology Seminar. (2) Seminar, two hours; laboratory, one hour; outside study, three hours. Introduction to departmental and campuswide technology resources, exploration of applications of technology in education, and development of means of using technology to assess and document teaching competence. S/U grading.


596A. Directed Individual Studies in Orchestration and Composition. (2, 4, or 6) Tutorial, to be arranged. Only 4 units may be applied toward MA or MM degree requirements. May be repeated for credit. S/U or letter grading.

596C. Directed Individual Studies in Performance Practices. (2 to 12) Tutorial, to be arranged. Only 4 units may be applied toward MA or MM degree requirements. May be repeated for credit. S/U or letter grading.

597. Preparation for Master’s Comprehensive Examination or PhD Qualifying Examinations. (2 or 4) Tutorial, to be arranged. S/U grading.

598. Guidance of MA Thesis. (4, 8, or 12) Tutorial, to be arranged. Only 4 units may be applied toward degree requirements. May be repeated for credit. S/U or letter grading.

599. Guidance of PhD or DMA Dissertation. (4, 8, or 12) Tutorial, to be arranged. May be repeated for credit. S/U grading.

Music Industry

Interdisciplinary Minor

Herb Alpert School of Music

1642A Schoenberg Music Building
Box 951616
Los Angeles, CA 90095-1616

310-825-4768
belen.maria@schoolofmusic.ucla.edu
http://www.schoolofmusic.ucla.edu/music-industry-and-technology-at-ucla

Robert W. Fink, PhD, Chair

Faculty Committee

Lily Chen-Hafteck, PhD (Music)
Nina S. Eidsheim, PhD (Musicology)
Robert W. Fink, PhD (Musicology)
Juliana K. Gondek, MM (Music)
Steven J. Loza, PhD (Ethnomusicology)
James W. Newton, BM (Ethnomusicology)

Scope and Objectives

The Music Industry minor is an interdisciplinary and interdepartmental series of courses designed to (1) introduce students to a critical perspective on the formative effects of the music industry and music technology has had on musical practices around the world, (2) prepare students for employment in the music industry, including marketing and sales, recording production, intellectual property, sound recording, and arranging, and (3) contribute to improved communication and interaction between the University, the music industry, and the musical life of Los Angeles.

Undergraduate Study

Music Industry Minor

The Music Industry minor is intended to provide students with an introduction to the history, theory, and practice of music as a calling
Music Industry

Upper-Division Courses

101. Seminar: Music Industry, Technology, and Science. (4) Seminar, four hours; outside study, eight hours. Required of Music Industry minors. Introduction to intellectual and theoretical frameworks that form Music Industry minor and that scholars of music and music industries have developed to analyze, understand, and perhaps judge what happens out there, including how music business works in financial course in consultation with the minor chair.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

With the exception of Music Industry 195 (mandatory P/NP grading), each minor course must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.

Music Industry


104. Music and Brain. (4) Formerly numbered 104.) Seminar, three hours; outside study, nine hours. Fundamentals of American law as it applies to entertainment business, with special attention to music and its use in film, television, and new media. Legal relationships in entertainment business and basic business practices. Exploration of legal aspects of producing works in entertainment field, from acquisition of rights and benefit through production and distribution. Letter grading.

104A. Music and Law. (Formerly numbered 104.) Seminar, three hours; outside study, nine hours. Fundamentals of American law as it applies to entertainment business, with special attention to music and its use in film, television, and new media. Legal relationships in entertainment business and basic business practices. Exploration of legal aspects of producing works in entertainment field, from acquisition of rights and benefit through production and distribution. Letter grading.

104B. Legal and Business Aspects of Sound Recordings. (4) Seminar, three hours; outside study and research, nine hours. Exploration of legal and business aspects of production of sound recordings. More detailed practical focus on legal aspects of recording process itself, from initial assembly of material to final distribution and collection of royalties, with material covered also relevant to audiovisual recordings. Introductory presentation on contract, copyright, and trademark law as background to step-by-step process of securing agreements necessary for production of commercial distribution of recordings. Letter grading.

105. Songwriters on Songwriting. (4) Lecture, three hours; outside study, nine hours. With special focus on songwriting process of rock era, examination of work of greatest songwriters of post-World War II generation (circa 1952 to 1994) and those they have influenced through creative as well as practical industry guidelines, and future worthy practitioners. Coverage of songwriting, arrangement and record production, music publishing, and record business in 20th and 21st centuries. Guest music industry professionals to discuss writing, creating processes and discuss their paths to songwriting and their place in world of music. Course is not workshop or tutorial on how to write songs. Letter grading.

106. Stardom Strategies for Musicians. (4) Lecture, four hours; outside study, eight hours. Help for students to determine what music career best serves their own lives and gives them tools that help them be successful in their lives and careers. Guest speakers, including top music agents, managers, publicists, and performers, to be featured. Letter grading.

107A. Audio Technology for Musicians I. (4) Formerly numbered 107.) Studio, four hours; outside study, eight hours. Equally for singers using microphones and other media. Electronic equipment and procedures permeate music making, and students to understand their logic is key for any musician today. Practical technical aspects and procedures of equipment and software (sequencers, recorders, mixers, microphones, and so on) most commonly used in contemporary music making. Main sound processing types (equalizers, compressors, reverberation). Fundamental aspects of most widely spread music production software and hardware. P/NP or letter grading.

107B. Audio Technology for Musicians II. (4) Studio, four hours; outside study, eight hours. Four-semester introduction to audio technology for musicians. Emphasis on practical skills to be learned in a studio environment. Students record live performances, practice negotiation, and record and produce their own music. Letter grading.

108. Finding and Sustaining Performing Arts Organizations. (4) Seminar, four hours. Examination of process of founding performing arts organizations, beginning with inspiration to do so, clarifying organization mission, and mechanics of becoming nonprofit corporation; issues of funding, press relations, finding appropriate venues, developing audience; mechanics, legal and routine, of running arts businesses; establishing relationships with other organizations in field; issues of making and distributing recordings. Students create on paper one performing arts organization, including developing mission statement, preparing bylaws, and writing sample grant proposals. Letter grading.

109. Docs that Rock, Docs that Matter. (4) Seminar, three hours. Close look at various genres of rock documentaries and goals, methods, and challenges inherent in making them, with award-winning documentary writer/director. Who is a successful (or unsuccessful) music documentary? Viewed through very specific focus of story and storytelling. P/NP or letter grading.

110. Music Business Now. (4) Seminar, three hours. History on introduction to business of music, with emphasis on marketing and media. P/NP or letter grading.

111. Music Supervision. (4) Seminar, four hours; outside study, eight hours. Learning the employment of craft of songwriting. Examination, analysis, and implementation of song structure, lyric and melody writing, arranging, orchestration, and modern (and primitive) recording techniques. How songwriting has evolved in modern society (since advent of phonograph player/radio), how songs and society affect and reflect one another, and how these informs songs and songwriters. Letter grading.

112. Comprehensive Songwriting. (4) Seminar, four hours; outside study, eight hours. Writing and employment of techniques and methods, and process of music production and larger issues in art of making music. Students learn how to foster and capture performance and emotion in music through variety of methods and tools, including artistic direction in studio and choices made in sound, arrangement, and application of technique. Letter grading.

115. The Art of Music Production. (4) Lecture, three hours; outside study, eight hours. Exploration of techniques, methods, and process of music production and larger issues in art of making music. Students learn how to foster and capture performance and emotion in music through variety of methods and tools, including artistic direction in studio and choices made in sound, arrangement, and application of techniques. Letter grading.

122. Internet Marketing and Branding for Musicians. (Formerly numbered 112.) Seminar, four hours; outside study, eight hours. Requisites: courses 101, 102, 104A, or permission by permission of instructor. Digital world for musicians has changed dramatically. Musical artists who previously have only the ability to self-market and create communities directly with listeners, but also can thrive in online communities with musicians around world. Digital has transformed not just way musicians get work, but also way they create. Internet marketing has morphed into Internet community crowdsourcing—very different world for musicians and musical organizations. Study driven by presentation of work of current professionals for musicians, organizations, and venues. Students dive into best practices around world, growing brand, finding target market online, and engaging with right

and a business and to provide opportunities for students to work with practitioners on real-world projects in the music industry.

To apply to the minor, transfer students must have completed a minimum of one term of residency and been admitted as freshman must have completed a minimum of three terms of residency at UCLA. Students must be in good academic standing with an overall grade-point average of at least 2.0.

In addition, students who are not Ethnomusicology, Music, or Music History majors must complete at least one lower-division performance or ensemble course selected from Ethnomusicology 91A through 912, Music C90A through 90N, or C90Q through M90T prior to application to the minor. The performance requirement may also be fulfilled through successful completion of Music Industry 111 or through an equivalent music industry course by petition.

Required Upper-Division Courses (28 units): Music Industry 101, 195 (8 units), and five additional courses (20 units) selected from Ethnomusicology C100, 105, M110B, 117, C169, 172A, C184, Music C176, Music History 140, 164, 185, Music Industry 102 through 112, 122, M182, 186, 195, 197.

In addition, students who are not Ethnomusicology, Music, or Music History majors must demonstrate music theory proficiency by either successfully completing Music 3 with a minimum grade of C+, or completing an equivalent course in music theory.

In addition, students who are not Ethnomusicology, Music, or Music History majors must demonstrate music theory proficiency by either successfully completing Music 3 with a minimum grade of C+, or completing an equivalent course in music theory.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

With the exception of Music Industry 195 (mandatory P/NP grading), each minor course must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.
communities of practice to build their own connections and online portfolio of collaborators. Letter grading.

**M182. Music Industry.** (Same as Ethnomusicology CM182, Music CM182, and Music History CM186) Lecture, four hours; discussion, one hour; outside study, seven hours. Limited to Ethnomusicology, Music, and Music History majors. Examination of influence of music industry on way music is created, performed, listened to, evaluated, and used today. Historical approach taken, beginning with music published in 18th century and continuing through development of audio recordings to MTV and popular music today. Letter grading.

**188. Special Courses in Music Industry.** (4) Seminar, four hours, outside study, eight hours. Special topics in music industry for undergraduate students taught on experimental or temporary basis. May be repeated for credit with topic change. Letter grading.

**195. Community or Corporate Internships in Music Industry and Technology.** (4) Tutorial, eight hours. Limited to juniors/seniors in Music Industry minor with minimum cumulative 3.0 grade-point average. Internship in supervised setting in community agency or private business. Students meet on regular basis with instructor and provide periodic reports of their experience. May be repeated for maximum of 8 units. Individual contract with supervising faculty member required. P/NP grading.

**197. Individual Studies in Music Industry and Technology.** (2 to 4) Tutorial, six to 12 hours. Limited to juniors/seniors in Music Industry minor with minimum cumulative 3.0 grade-point average. Individual intensive study in music industry and technology, with scheduled meetings to be arranged between faculty member and student. Tangible evidence of mastery of subject matter resulting in research project/paper required. May be repeated for maximum of 8 units. Individual contract with supervising faculty member required. Letter grading.

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**MUSICOLOGY**

**Herb Alpert School of Music**

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Box 951616
Los Angeles, CA 90095-1616
310-825-4768
belen.maria@schoolofmusic.ucla.edu
http://www.musicology.ucla.edu

**Elisabeth C. Le Guin, PhD, Chair**

**Professors**

Nina S. Eidsheim, PhD
Robert W. Fink, PhD
Mark L. Kligman, PhD (Mickey Katz Endowed Professor of Jewish Music)
Raymond L. Knapp, PhD
Elisabeth C. Le Guin, PhD
Tamara J.M. Levitz, PhD
David W. MacFadyen, PhD
Mitchell B. Morris, PhD
Timothy D. Taylor, PhD

**Professors Emeriti**

Murray C. Bradshaw, PhD
Frank A. D’Accone, PhD
Marie Louise Göllner, PhD
Richard A. Hudson, PhD

**Associate Professors**

Shana L. Redmond, PhD
Elizabeth Randall Upton, PhD

**Assistant Professor**

Jessica A. Schwartz, PhD

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**Scope and Objectives**

The Department of Musicology curricula allow students to gain a broad understanding of the history and culture of music. Courses cover virtually every period, style, and genre, including jazz and other popular musics. The department is aligned with the departments of Ethnomusicology and Music and aspires to promote productive collaboration between performance and scholarship, a cross-cultural global understanding of the art of music, and preparatory training for a broad range of careers in music after students graduate.

Music history appeals to undergraduate students with musical backgrounds whose interests and principal career goals lie in areas other than professional performance. The undergraduate program prepares students for graduate programs in music and related fields and offers training within the broader context of the humanities.

The graduate program offers courses leading to the MA and PhD degrees. It is designed to equip students to pursue careers not only in teaching but also in other areas that require bibliographical skills and training in research methodologies. The department offers teaching and research assistantships each year for qualified students.

**Undergraduate Study**

The Music History major is a designated capstone major. Undergraduate students who are not pursuing departmental honors must complete a senior thesis that demonstrates the skills and expertise they have acquired in earlier coursework. Students are expected to conceive and execute a project that identifies and engages with a problem within a specialized topic, identify and analyze appropriate primary sources both textual and musical, and have a working knowledge of scholarly discourse relative to a specialized topic. While an extended essay is the default expectation for a completed project, students are encouraged to seek alternative formats, such as a lecture-recital, set of lesson plans, or video/audio presentation. Students discuss and critique the work of their peers and present their work to other students and, if they choose, to the public as part of a student-organized conference.

**Music History BA**

**Capstone Major**

**Admission**

The Music History program assumes that students have some musical background before entering UCLA. Although auditions are not required, prospective majors should be sufficiently competent on an instrument or in voice to participate in a performance group, as required by the program.

**Preparation for the Major**

**Required:** Music History M6A, M6B, M6C, 12W, Music 20A, 20B, 20C, and 6 units (three terms) of performance organizations selected from Ethnomusicology 91A through 91Z, Music C90A through C90Q, Music History 28A through 28C, CM90T, or Music Industry 111; one lower-division humanities elective (minimum of 4 units; choose from study list held in Herb Alpert School of Music Department of Student Services). Enrollment in Music History M6A, M6B, M6C and Music 20A, 20B, 20C requires taking the Music Theory Placement Examination administered by the Music Department.

**Transfer Students**

Transfer applicants to the Music History major with 90 or more units must complete one year of music theory prior to admission to UCLA. Experience in music performance is strongly recommended. Transfer students are required to take Music History 12W at UCLA.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

**The Major**

**Required:** Music History 125A, 125B, 125C, 126, 127, 128 (in a given year, the department may designate individual Music History seminars in the range 160-185, 188, or 191 as equivalent to 126 and 127); one additional upper-division elective, chosen from Music History 160 through 185, 191A through 191P, 195 (if supervised by Musicology faculty), or an equivalent seminar course in ethnomusicology, music, or music industry (see study list held in the Herb Alpert School of Music Office of Student Services and Enrollment Management; enrollments may be limited—check with the department or instructor); and the department capstone sequence, Music History 187A, 187B, 187C.

Each course applied toward the major must be taken for a letter grade (courses offered only on a P/NP grading basis are acceptable).

**Honors Program**

The honors program is designed for Music History majors who wish to carry out an extended independent research project that culminates in a departmental honors thesis of approximately 30 pages. The program gives qualified students the opportunity to work closely with individual professors on an in-depth supervised research and writing project. All junior and senior Music History majors who have completed a minimum of four upper-division music history courses with a departmental grade-point average of 3.7 or better and an overall GPA of 3.0 or better are eligible to apply. Normally, the thesis must be completed during fall quarter of the senior year.

To qualify for graduation with departmental honors, students must (1) complete all requirements for the major, (2) have a cumulative grade-point average of 3.7 or better in upper-division courses in the department and an overall GPA of 3.0 or better, and (3) complete at least one term of Music History 198 (2 units) with a grade of A− or better on the resulting thesis.

To qualify for graduation with departmental highest honors, students must (1) complete all requirements for the major, (2) have a cumula-
Musicology

Music History Minor

The Music History minor provides undergraduates with an overview of music history and the study of music. Students may select from a wide variety of undergraduate courses that range through the history of European and American music.

To enter the minor, students must have an overall grade-point average of 2.0 or better and file a petition with the Office of Student Services and Enrollment Management in 1642 Schoenberg Music Building. For more information, contact the program adviser, Belén María, at 310-825-4768.

Required Lower-Division Courses (10 units): Two music history courses with grades of C or better.

Required Upper-Division Courses (21 to 25 units): Music History 101, one seminar course from 160 through 185 or 191A through 191P, one additional upper-division music history course, and two additional upper-division ethnomusicology, music history, or music industry courses (minimum 8 units). Enrollments in some courses may be limited; check with the department or instructor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade. Courses offered only on a P/NP grading basis are acceptable, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Musicology offers Master of Arts (MA), Candidate in Philosophy (CPHIL), and Doctor of Philosophy (PhD) degrees in Musicology.

Music History

Lower-Division Courses

3. Introduction to Classical Music. (5) Lecture, four hours; discussion, one hour. Survey of music of Western classical tradition, with emphasis on historical context, musical meanings, and creation of tradition itself. P/NP or letter grading.

5. History of Rock and Roll. (5) Lecture, four hours; discussion, one hour. Analysis of forms, practices, and meanings of rock and roll music, broadly conceived, from its origin to present. Emphasis on how this music has reflected and influenced changes in sexual, racial, and class identities and attitudes. Credit for both courses 5 and 185 not allowed. Letter grading.

M6A-M6B-M6C. Introduction to Musicianship. (2-2-2) (Same as Ethnomusicology M6A-M6B-M6C and Music M6A-M6B-M6C.) Laboratory, four hours. Preparation: placement examination. Course M6A is enforced requisite to M6B, which is enforced requisite to M6C. Students must receive grade of C– or better to proceed to next course in sequence. Introduction to musicianship through in-depth exploration of basic common musical elements and training in aural recognition, sight singing, dictation, and keyboard skills. Focus on topics such as tonal and modal harmony, rhythm, improvisation, composition, notation, and ear training to prepare students for later theory courses, participation in music performance in the university, and professional careers. Letter grading.

7. Film and Music. (5) Lecture, four hours; discussion, one hour. History of music and cinema, particularly ways music is used to produce meanings in conjunction with visual image. Credit for both courses 7 and 177 not allowed. P/NP or letter grading.

8. History of Electronic Dance Music. (5) Lecture, four hours; discussion, one hour. Survey of groove-based electrified dance music from its origins in 1960s pop and soul to present, covering disco, house, techno, ambient, rave, and jungle. Emphasis on interaction of technology, musical structures, psychoactive drugs, and club cultures to induce altered states of musical experiences (status reality of political and spiritual transformation; electronic dance music as new art music. P/NP or letter grading.

9. American Popular Song. (5) Lecture, four hours; discussion, one hour. American popular music before advent of rock and roll in 1950s, with special emphasis on song tradition of Tin Pan Alley. P/NP or letter grading.

12W. Writing about Music. (5) Lecture, four hours; laboratory, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Emphasis on learning specific skills, incorporating technical description, historical contextualization, subjective reaction, and certain stylistic conventions necessary in writing about music. Satisfies Writing II requirement. Letter grading.

13. Punk: Music, History, Subculture. (5) Lecture, four hours; discussion, one hour. Developments in punk music in their historical and subcultural contexts. Survey of prepunk and musical antecedents in 1960s, rise of punk in 1970s, and tracing of its expressive trajectories to present day. P/NP or letter grading.


35. Introduction to Opera. (5) Lecture, four hours; discussion, one hour. Exploration of history of opera from its origins in Florentine Camerata in Italy in early 17th century, through ages of Enlightenment and Romanticism, and ending with modern era of early 20th century. History of opera, opera houses, and life of composers and singers, operatic conventions, drammaturgy, plot, stagings, hermeneutics of opera, and musical style, with focus on learning appreciation of music of opera within rich context of its compelling history. P/NP or letter grading.

60. American Musical. (5) Lecture, four hours; discussion, one hour. 90 minutes. Survey of American musical in 20th century, beginning with its roots in operetta, vaudeville, and Gilbert and Sullivan, and focusing on its connections to politics, technology, film, opera, and dance, and variety of popular musical styles, including Tin Pan Alley, jazz, and rock. Credit for both courses 60 and 160 not allowed. P/NP or letter grading.

81. Music in Los Angeles. (5) Lecture, four hours; discussion, one hour. Exploration of history of music in Los Angeles. From Spanish missions and history of Los Angeles to greater emphasis on music in 20th century, with special focus on European émigrés, internment and postwar history of Japanese American community, Chicano and Mexican American music to present, African American traditions including jazz on Central Avenue, 1960s and rock scene, and more recent history that includes developments in punk and hip-hop. P/NP or letter grading.

62. Mozart. (5) Lecture, four hours; discussion, one hour. Survey of works of Wolfgang Amadeus Mozart, in context of both his age and our own. Credit for both courses 62 and 162 not allowed. P/NP or letter grading.

63. Bach. (5) Lecture, four hours; discussion, one hour. Designed for undergraduate students. Life and works of Johann Sebastian Bach. Credit for both courses 63 and 163 not allowed. P/NP or letter grading.

64. Motown and Soul: African American Popular Music of 1960s. (5) Lecture, four hours; discussion, one hour. Survey of developments in post-World War II African American popular music, with special attention to musical achievements of Motown Records, Stax, and other rhythm and blues, funk, and soul music centers of production. Relationships between musical forms and cultural issues of 1960s, including Civil Rights Movement, counterculture, black nationalism, capitalism, and separatism, and larger dimensions of African American experience as mediated through groove-based music. Credit for both courses 64 and 164 not allowed. P/NP or letter grading.

65. Blues in American Music. (5) Lecture, four hours; discussion, one hour. History of blues, both as specific genre and as range of techniques and approaches that have been at center of American music and culture, from 19th-century roots to present. Exploration of commonly accepted blues mainstream exemplified by figures like Bessie Smith, Robert Johnson, and B.B. King, but also central role blues has played in jazz, folk, country, gospel, rock, soul, and rap. While following evolution of music through 20th century, examination of how blues has served as metaphor for African American culture as it permeates American traditions. Credit for both courses 65 and 165 not allowed. P/NP or letter grading.

66. Getting Medieval. (5) Lecture, four hours; discussion, one hour. Exploration of idea of medievalism in music and culture from Wagner to video games. Music covered includes film scores, opera, Gregorian chant, early music revival, folk songs, progressive rock, and Goth. Credit for both courses 66 and 166 not allowed. Letter grading.

M67. Popular Jewish and Israeli Music. (5) (Formerly numbered 67.) (Same as Jewish Studies M67.) Lecture, four hours; discussion, one hour. Music of Jews is diverse, with history of several thousand years and series of developments in modernity; music in Jewish life covers variety of styles found in many contexts. Exploration of music of Jews within last 100 years, with focus on contemporary Jewish music in America and Israel. Examination of music in Israel, with focus on songs of land of Israel, Israeli rock, and Muzika Mizrahit (Middle Eastern popular music). P/NP or letter grading.

68. Beatles. (5) Lecture, four hours; discussion, one hour. Examination of life and music of Beatles within social and historical context of 1960s. Credit for both courses 68 and 168 not allowed. P/NP or letter grading.

69. Music and Politics. (5) Lecture, four hours; discussion, one hour. Examination and demonstration of various ways in which music is informed by and informs politics. From individual performances to mass demonstrations, music is recognizable as a political act and tool that is not simply representative, but also constitutive, meaning that music creates belief systems (politics). Examination of development and use of music by social movements, political parties, and nations, and critical listening practices to better hear world around us and sounds that compose its futures. P/NP or letter grading.
70. Beethoven. (5) Lecture, four hours; discussion, one hour. Designed for undergraduate students. Life and works of Ludwig van Beethoven. Credit for both courses 70 and 170 not allowed. P/NP or letter grading.

71. Listening. (5) Lecture, four hours; discussion, one hour. Introduction to humanistic study of listening, as perceptual modality for engaging others and world, with focus on experience, history, politics, and ethics of listening. Hearing is shared perceptual faculty among able-bodied people, but listening practices are shaped by history, society, and culture. Hearing people listen differently depending on when, where, and how they hear, and as who they are as individuals. P/NP or letter grading.

72. Sacred Music. (5) Lecture, four hours; discussion, one hour. Study of forms and liturgies of Western church music. Credit for both courses 72 and 172 not allowed. P/NP or letter grading.

M73. Music and Religion in Popular Culture. (5) (Same as Ethnomusicology M73.) Lecture, four hours; discussion, one hour. Survey of popular music in religious traditions since the 1970s. Growth of music in Jewish, Christian, Islamic, Orthodox, Panamanian, and Conservative, and Christian contemporary music, from evangelical to cross-over artists performing in mainstream. Credit for both courses M73 and M173 not allowed. P/NP or letter grading.

75. History of Jazz. (5) Lecture, four hours; discussion, one hour. History and analysis of variety of jazz styles, from late 19th-century forerunners to present, with emphasis on social meanings of musical practices. Letter grading.

79. Dancehall, Rap, Reggae: Beats, Rhymes, and Routes in African Diaspora. (5) Lecture, four hours; discussion, one hour. Survey of histories of three closely connected music genres: Jamaican dancehall, U.S., and Puerto Rican/Panamanian reggae. Introduction to major performers in each genre, comparison of stylistic traits associated with each music, and exploration of technologies associated with contemporary music production. P/NP or letter grading.

M87. Special Courses in Music. (5) (Same as Ethnomusicology M87 and Music M87.) Lecture, four hours; discussion, four hours. Limited to undergraduate Ethnomusicology, Music, and Music History majors. Study and analysis of current and/or special topics in ethnomusicology, music, and music history taught by resident and visiting faculty members. May be repeated for credit with topic and instructor change. Letter grading.

88. Sophomore Seminars: Music History. (2) Seminar, two hours. Designed for sophomore Music History majors or students interested in pursuing Music History major. Introduction to music history as an academic discipline, with particular emphasis on musicology at UCLA. Study of music and its history and consideration of theoretical issues central to musicology as it is practiced today, including gender and sexuality, music and politics, race, popular music studies, and jazz studies. Letter grading.

CM90T. Early Music Ensemble. (4) (Same as Music M90T.) Activity, four hours. Preparation: audition. Group performance of Western vocal and instrumental music from historical periods prior to 1800. Early instruments may be used at instructor's discretion. May be repeated for credit without limitation. May be concurrently scheduled with Musicology C490T, P/NP or letter grading.

94. Music and Internet. (5) Lecture, four hours; discussion, one hour. Survey of changes undergone by music in digital environment. As music becomes increasingly pervasive—found everywhere, yet living nowhere special—what social, economic, political, and aesthetic changes? P/NP or letter grading. What does Internet sound like? P/NP or letter grading.

Upper-Division Courses

101. Issues and Methods in Musicology. (4) Seminar, three hours. Introduction for music history minors to practical aspects and fundamental issues of musicology as academic discipline. How musicologists go about establishing, editing, performing, analyzing, and interpreting musical texts. Exposure to kinds of scholarly and philosophical foundations of scholarship that continue to shape field of musicology. Letter grading.

125A. Music, History, and Culture: Era of Church and Patron. (5) Lecture, four hours; discussion, one hour. Requisite: course M65 (may be taken concurrently). Course 125A is requisite to 125B, which is requisite to 125C. Students must receive grade of C or better to proceed to next course in sequence. Introduction to history, culture, and structure of Western music, era of church and court patronage, through selected topics, repertoires, and analytical techniques. Letter grading.

125B. Music, History, and Culture: Era of Empires and Marketplaces. (5) Lecture, four hours; discussion, one hour. Requisite: course M65 (may be taken concurrently). Course 125A is requisite to 125B, which is requisite to 125C. Students must receive grade of C or better to proceed to next course in sequence. Introduction to history, culture, and structure of Western music, in era of empires and marketplaces, through selected topics, repertoires, and analytical techniques. Letter grading.

125C. Music, History, and Culture: Modern and Postmodern Era. (5) Lecture, four hours; discussion, one hour. Requisite or corequisite: M65. Requisite or corequisite: M65. Designated to supplement broad historical survey in Music History 125 series by focusing on interlocking questions of how cultures make music, and how music makes cultures. Letter grading.


159. American Music and Culture in the 20th Century. (5) Lecture, four hours; discussion, one hour. Requisite or corequisite: M65. Designated to supplement broad historical survey in Music History 125 series by focusing on interlocking questions of how cultures make music, and how music makes cultures. Letter grading.


165. Blues and Individual Expression. (5) Seminar, two hours. Enforced corequisite: attendance, but not enrollment, in course 66 lecture. Credit for both courses 165 and 166 not allowed. Letter grading.


170. Beethoven: Study of Selected Works. (5) Seminar, 90 minutes. Corequisite: attendance, but not enrollment, in course 70 lecture. Designed to meet needs of students who read music and wish to examine Beethoven's music in greater depth. Credit for both courses 70 and 170 not allowed. Letter grading.

172. Selected Topics in Sacred Music. (5) Seminar, two hours. Enforced corequisite: attendance, but not enrollment, in course 70 lecture. Designed to meet needs of students who read music and wish to examine some ways that music has been held to embody, support, and enact sacredness, including experience of god(s), sense of transcendental, work of liturgy, and intersection of music, politics, and culture for both courses 72 and 172 not allowed. Letter grading.

M173. Selected Topics in Music and Religion in Popular Culture. (5)
193D. Music History Performance/Analysis Seminars for Majors. (2) Seminar, two hours. Recommended requisite: course 193C. Limited to Music History majors. Introduction to how music historians engage with issues of musical performance, and of how historical research and theoretical issues, and methodologies can inform music as practice, especially as it is performed, recorded, listened to, danced to, and otherwise consumed. Continued attention to issues of bibliographic control. Normally taken in senior year. P/NP grading.

195. Community Internships in Music. (2 to 4) Tutor, one hour; fieldwork, 10 hours. Limited to juniors/seniors. Interim supervised setting in community agency or business related to music or music history. Students meet on regular basis with instructor and provide periodic reports of their experiences and final project. May be repeated for credit. Individual contract with supervising faculty member required. P/NP grading.

197. Individual Studies in Music History. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Intensive study with scheduled meetings to be arranged between faculty member and student. Signed reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract with supervisor required. Letter grading.

198. Special Courses in Music History. (4) Lecture, four hours. Special topics in music history for undergraduate students taught on temporary basis. Consent of Class of Topics and instructors. May be repeated for credit. S/U or letter grading.

199A. Research Colloquia in Music History. (4) Seminar, four hours. Limited to senior Music History majors. Designed to bring together students undertaking supervised tutorial research in seminar setting with one or more faculty members to complete their capstone projects and share their work with their peers, as well as act as interlocutors for other course members. Students expected to present their work and to discuss its relation to and critique of other works of others at similar stage of development. They may elect to showcase their work before academic publics (e.g., through organizing one conference or one special publication). Letter grading.

199B. Independent Studies in Music History. (4) Seminar, three hours. Designed for graduate musicology majors, ethnomusicology, and music students. Introduction to history of different fields of music scholarship (with strong focus on musicology) and to selected debates in those fields. Practical tools for research, logic and structure of arguments, evidence, critical thinking and critique, historiography, rhetoric and voice, and archival and ethnographic research. Introduction to practical written forms such as abstract, grant proposal, paper/book proposal, and review. Letter grading.

200A. Introduction to Music Scholarship. (6) Seminar, three hours. Designed for graduate musicology, ethnomusicology, and music students. Introduction to history of different fields of music scholarship (with strong focus on musicology) and to selected debates in those fields. Practical tools for research, logic and structure of arguments, evidence, critical thinking and critique, historiography, rhetoric and voice, and archival and ethnographic research. Beginning bibliographic control. Normally taken in senior year. P/NP grading.

200B. Critical, Cultural, and Social Theory. (6) Seminar, three hours. Designed for graduate musicology, ethnomusicology, and music students. Introduction to issues surrounding music as social, cultural, and historical practice, with strong emphasis on critical, cultural, and social theory. May include introduction to social theory, materialist theories of culture, postcolonialism, critical theory, or overview of cultural theory or of group of theories selected by instructor, including feminism, performance studies, sociology, historiography, urban studies, anthropology, philosophy, psychoanalysis, poststructuralism, gender, race, and sexuality studies, lesbian, gay, bisexual, transgender, and queer studies, and so on. Introduction to set body of theory in its relation to study of music. Letter grading.

200C. Music Aesthetics, Analysis, and Philosophy. (6) Seminar, three hours. Designed for graduate musicology, ethnomusicology, and music students. Exploration of selected philosophical, aesthetic, and/or analytical perspectives on music to gain insight into selected analytical and philosophical approaches to phenomenon of music and to acquire skills in analyzing and interpreting variety of repertories. Letter grading.

201. Repertory and Analysis. (8) Seminar, two hours. Recommended requisite: course 200A. Exploration of defined repertory through readings and analysis. Specific topics vary. May be repeated for credit. S/U grading.

245. Seminar: Analytical/Research Repertoire Topics. (4) Seminar, three hours. Designed for graduate musicology students. Coverage of analytical topics that vary from year to year. May be repeated for credit. Meets with course 246; concurrent enrollment in both courses not allowed. Letter grading.

246. Audit Seminar: Analytical/Research Repertoire Topics. (4) Seminar, three hours. Designed for graduate musicology students. Coverage of analytical topics that vary from year to year. May be repeated for credit. Meets with course 245; concurrent enrollment in both courses not allowed. S/U grading.

248. Seminar: Special Topics in Musicology. (4) Seminar, three hours. Exploration of topics in musicology that vary from year to year. Topics may include historical, theoretical, or analytical approaches to subjects within musicology. Topics announced in advance. May be repeated for credit. Letter grading.

250. Seminar: Theoretical Topics. (4) Seminar, three hours. Designed for graduate musicology students. Coverage of theoretical topics that vary from year to year. May be repeated for credit. Meets with course 251; concurrent enrollment in both courses not allowed. S/U grading.

251. Audit Seminar: Theoretical Topics. (2) Seminar, three hours. Required or prerequisite; course 200A. Specific topics vary from year to year. May not be applied toward MA or PhD degree requirements. May be repeated for credit. Meets with course 255; concurrent enrollment in both courses not allowed. S/U grading.

255. Seminar: Historical Topics. (4) Seminar, three hours. Designed for graduate musicology students. Coverage of historical topics that vary from year to year. May be repeated for credit. Meets with course 256; concurrent enrollment in both courses not allowed. S/U grading.

259. Audit Seminar: Mapping Sonic Urban Geography of Los Angeles in 1940s. (2) Seminar, three hours. Limited to departmental graduate students and those in Urban Humanities Certificate Program. Exploration of methodologies and conceptual frameworks for mapping sonic urban geography of Los Angeles in 1940s. In-depth critical discussion of current theories of music and space and of most recently developed methodologies for undertaking ethnographic or anthropological study of sound, including recording and mapping soundscapes. May not be applied toward MA or PhD degree requirements. May be repeated for credit. Meets with course 256; concurrent enrollment in both courses not allowed. S/U grading.

260. Mapping Sonic Urban Geography of Los Angeles in 1940s. (4) Seminar, three hours. Limited to departmental graduate students and those in Urban Humanities Certificate Program. Exploration of methodologies and conceptual frameworks for mapping sonic urban geography of Los Angeles in 1940s. In-depth critical discussion of current theories of music and space and of most recently developed methodologies for undertaking ethnographic or anthropological study of sound, including recording and mapping soundscapes. Letter grading.
NAVAL SCIENCE – NAVY ROTC

College of Letters and Science
120T Student Activities Center
Box 951399
Los Angeles, CA 90095-1399
310-825-9075
nrotcbruin battalion@gmail.com
http://www.navy.ucla.edu

Christopher J. Michelsen, MS, Colonel, Chair
Professor
Christopher J. Michelsen, MS, Colonel, U.S. Marine Corps
Adjunct Assistant Professors
Evan A. Barnes, MS, Captain, U.S. Marine Corps
Robert M. Hill, MS, Commander, U.S. Navy
Colum P. McCarthy, BS, Lieutenant, U.S. Navy
Matthew B. Smith, BA, BS, Lieutenant, U.S. Navy

Scope and Objectives

In accordance with the National Defense Act of 1920 and with the concurrence of the Regents of the University, a unit of the Army Senior Division Reserve Officers’ Training Corps (ROTC) was established on the Los Angeles campus of the University in July 1920. Navy and Air Force units were established in 1938 and 1949 respectively.

This voluntary training in the Naval ROTC program allows students to qualify for an officer’s commission in the Navy or Marine Corps while completing their college education. The ROTC curricula are not considered academic majors, but ROTC courses may be taken as free electives and applied toward the total course requirements of a major. For students contracted in the Naval Science Department, 26 units of naval science credit may be applied toward the requirements for the bachelor’s degree.

All three ROTC departments offer voluntary four- and three-year programs for freshmen and sophomores. The Army and Navy/Marine Corps also offer a two-year program for current and transfer students. All have leadership laboratories that teach leadership and management skills.

Active duty obligation following commissioning varies depending on branch of service and designated career field or occupational specialty.

Scholarships

ROTC scholarships are awarded on a competitive basis to U.S. citizens regardless of parents’ income. Scholarships cover tuition, a book allowance, fees, and a tax-free monetary allowance between $250 and $400 per month during the academic year. Applications for scholarships may be obtained online or by calling 800-628-7682. Completed applications should be submitted no later than January 31 for the fall term. Two or three-year scholarship applications may be obtained from the Naval Science Department and are considered when received.

Navy/Marine Corps ROTC Program

The Department of Naval Science provides professional training for students leading to an active duty commission at graduation in the U.S. Navy or Marine Corps. Through the Naval Reserve Officers’ Training Corps (NROTC), scholarship students receive full tuition, fees, books, and subsistence pay of $250 to $400 per month. Nonscholarship students may apply to participate as members of the midshipman battalion under the NROTC College Program and, if selected for advanced standing prior to their junior year, may receive an active duty commission at graduation. Because of the rapid development of highly technical ship systems, aviation, and other military equipment, science and engineering majors are highly desirable; however, Navy/Marine Corps scholarships are currently available to students pursuing any major offered by the University, as long as they agree to complete basic technical requirements. In addition to University requirements, Navy option midshipmen must complete 30 units and Marine Corps option midshipmen 22 units of naval science courses, physical fitness test, and summer training cruises, each about four to six weeks long. Both Navy and Marine Corps option students must also pass a swimming test. The department alsocoordinates a sail training program for all Navy midshipmen through the UCLA Marina del Rey Aquatic Center. Some naval science courses are open to UCLA students who are not in the program with consent of instructor and demonstrated interest in the Navy/Marine Corps and related fields, such as engineering, navigation and naval operations, history, and management.

Undergraduate Study

Scholarship Program

The majority of naval science students attend the University on Navy/Marine Corps scholarships, which are awarded primarily on a four-year basis to high school seniors selected by a nationwide competition. A two-year upper-division scholarship program is also available, with a similar selection process, to students who have not yet begun their junior year in college. Applications for both types of scholarships are due by January 31 each year. In addition to tuition, fees, and uniforms, students receive subsistence pay of $250 to $400 per month and a book stipend. Scholarship students are obligated to serve on active duty for a minimum of four to five years following graduation and commissioning.

College Program (Nonscholarship)

Students attending the University who meet Navy/Marine Corps requirements but who do not have an NROTC scholarship may enroll in the College Program during their freshman year. These students have the opportunity to compete for scholarships after the completion of one term of naval science courses. If they do not win a scholarship, or choose not to compete for one, they must compete for advanced standing prior to their junior year. A two-year College Program is also available to students who have not yet started their junior year.
Students enter the two-year program with advanced standing after selection through national competition and completion of a six-week summer training period. Applications for the two-year program are due March 1 of the sophomore year. All College Program students receive uniforms, naval science textbooks and, once selected for advanced standing, monthly subsistence pay in their junior and senior years.

**Marine Corps Option**

Highly motivated NROTC students may request designation as Marine Corps option students and may also pursue any UCLA academic degree. The final summer training, and a requirement to be commissioned as an officer in the Marine Corps, involves intensive Marine training at Officer Candidate School in Quantico, VA. Marine Corps option students also participate, on a limited basis, in field training exercises during the academic year.

**Naval Science**

**Lower-Division Courses**

A. Naval Science Laboratory. (No credit) Laboratory, one hour. Requisite: course 102C. Limited to Naval Science ROTC midshipmen. Designed to cover service-specific administrative processes that are requisite knowledge for newly commissioned Navy and Marine Corps officers. No grading.

Z. Leadership Laboratory. (No credit) Laboratory, to be arranged. Mandatory for and limited to Naval Science ROTC midshipmen. Provides midshipmen with general military training and practical command and staff leadership experiences through classroom instruction and performance of various tasks and interactive processes within framework of organized midshipmen-run military unit, with oversight by active-duty military staff. As integral part of naval science curriculum, provides professional experiences designed to develop leadership potential and orientation for active duty. No grading.

1A. Introduction to Naval Science. (3) Lecture, three hours. Introduction to organization of Naval Service, various components of Navy, career opportunities, shipboard damage control, fire fighting, Naval and Marine Corps operations, and some customs and traditions of Naval Service. Letter grading.

1B. Naval Ship Systems I. (4) Lecture, four hours. Introduction to naval engineering, with emphasis on steam, nuclear, diesel, and gas turbine propulsion systems and their associated auxiliary components. Basic thermodynamic theory, electrical theory, stability, and buoyancy. P/NP or letter grading.

20A. Naval Ship Systems II. (4) Study of naval weapon systems, with emphasis on infrared, radar, and sonar principles. Target designation and acquisition, methods of solving fire control problem, target detection systems, Analysis of transfer and feedback functions inherent in weapon systems.

20B. Seapower and Maritime Affairs. (3) Lecture, three hours. Conceptual study of seapower, with emphasis on historical development of naval and commercial power. Seapower examined in relation to economic, political, and cultural strengths, with focus on current abilities of specific nations to use oceans to attain national objectives. P/NP or letter grading.

**Upper-Division Courses**


102B. Naval Leadership and Management I. (4) Examination of current and classical leadership and management theories, with emphasis on their application to junior military officer’s role as a leader/manager. Topics include managerial functions, performance appraisal, motivation theories, group dynamics, leadership theories, and communication.

102C. Leadership and Ethics. (4) Lecture, four hours. Recommended requisite for Naval Science ROTC midshipmen: course 102B. Capstone and second of two core leadership courses that provide academic foundation of NROTC leadership development. Integration of intellectual exploration of Western moral traditions and ethical philosophy with military leadership, core values, professional ethics, Uniform Code of Military Justice, and Navy regulations. Provides midshipmen with basic understanding of major moral traditions, including relativism, utilitarianism, Kantian ethics, natural law theory, divine command theory, and virtue ethics. Letter grading.

103. Evolution of Warfare. (4) Study of evolution of warfare, including historical and comparative consideration of influence that leadership, political, economic, and sociological and technological development factors have had on warfare and influence they continue to exert in age of limited warfare.

104. Expeditionary Military Operations. (4) Study of historical use of expeditionary military operations, with particular emphasis on doctrine, tactics, and equipment used. Examination of topics through study of political and military objectives by focusing on historical examples, including Marathon, Gallipoli, World War II, Korea, Beirut, and Grenada. Examination of contemporary doctrine through study of recent operations.

197. Individual Studies in Naval Science. (1 to 4) Tutorial, four hours. Limited to juniors/seniors, individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

**NEAR EASTERN LANGUAGES AND CULTURES**

**College of Letters and Science**

378 Humanities Building
Box 951511
Los Angeles, CA 90095-1511
310-825-4165
nreast@humnet.ucla.edu
http://www.nelc.ucla.edu

William M. Schniedewind, PhD, Chair

Professors

Khaled M. Abou El Fadl, JD, MA, PhD (Omar and Azereddine Alf Endowed Professor of Islamic Law)
Carol A. Bakhos, PhD
Aaron A. Burke, PhD
Elizabeth F. Carter, PhD
Michael D. Cooperson, PhD
S. Peter Cowe, PhD (Narenzai Professor of Armenian Studies)
Robert K. Englund, PhD
Lev Hakak, PhD
William M. Schniedewind, PhD (Kershaw Professor of Ancient Eastern Mediterranean Studies)
M. Rahim Shayegan, PhD (Jahangir and Eleanor Amuzegar Professor of Iranian Studies)
Susan E. Stiyomovics, PhD

Willeke Z. Wendrich, PhD (Joan Silsbee Professor of African Cultural Archaeology)

Professors Emeriti

Arnold J. Band, PhD
Andras E. Bodrogi, PhD
Giorgio Buccellati, PhD
Herbert A. Davidson, PhD
Ismail K. Ponnawala, PhD
Yona Sabar, PhD
Hanns-Peter Schmidt, PhD

Associate Professors

Kathryn (Kara) M. Cooney, PhD
Jacco Dieleman, PhD
Nouri Gana, PhD
Asma Sayeed, PhD

Assistant Professor

Domenico Ingentio, PhD

Senior Lecturers

Nancy Ezer, PhD
Latifeh E. Hagigi, MA
Anahid Keshishian, PhD

Lecturers

Hangang Kouloujian, MBA
Jeremy D. Smok, PhD

Adjunct Professor

Nader Saidi, PhD

Adjunct Assistant Professor

Hans Barnard, MD, PhD

**Scope and Objectives**

The mission of the Department of Near Eastern Languages and Cultures is the discovery, interpretation, dissemination, and preservation of human values created over a period of five or more thousand years in an area that was the cradle of all civilization.

The department offers instruction in the major modern and ancient languages of the Near East: Akkadian, ancient Egyptian, Arabic, Armenian, Berber, Coptic, Hebrew, Persian, and Turkish. To meet increasing demands for a knowledge of this area and its past and present, it treats each language in a wide perspective—as a means of communication, as a vehicle of a cultural heritage, as a research tool for the area, and as an object of research itself.

Undergraduate majors may be taken in Ancient Near East and Egyptology, Arabic, Iranian Studies, Jewish Studies, and Middle Eastern Studies. MA and PhD programs are offered in Ancient Near Eastern Civilizations, Arabic, Armenian, Hebrew, Iranian, Islamic Studies, Semitics, and Turkish.

Courses in the department prepare students for careers in government, foreign trade, teaching abroad, journalism abroad, archaeology, and further academic work involving the area.

**Undergraduate Study**

The department offers the Bachelor of Arts degree in five fields: (1) Ancient Near East and Egyptology, (2) Arabic, (3) Iranian Studies, (4) Jewish Studies, and (5) Middle Eastern Studies. In each of these fields students must meet the requisites and take the courses prescribed. Their advisor assists in selecting a plan of study developed around their interests.
Students may combine their major with one in another department (double major) to enhance their educational opportunities. Due to the number of additional courses required, they are advised to consider this option early in their academic career and in consultation with program advisers in both majors.

Ancient Near East and Egyptology BA
Preparation for the Major
Required: Three courses selected from Ancient Near East 10W, 15, Middle Eastern Studies M50A, M50B, Near Eastern Languages M20. Each course must be taken for a letter grade.

Transfer Students
Transfer applicants to the Ancient Near East and Egyptology major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one civilization course on Mesopotamia, Egypt, Near Eastern archaeology, or Middle Eastern cultures.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major
Students must complete 10 courses as follows:

Required Core Courses: One course selected from four of the following five areas (total of four courses):


History: Ancient Near East M103A through M104D, M110A, or Jewish Studies M182A.


Required Elective Courses: Any six courses (no more than three may be from Anthropology) selected from the categories above or from Ancient Near East 121A, 121B, 121C, 123A, C123B, 124, 125A, 125B, M125C, C177, Anthropology 110, CM110Q, 111, 112R, 130, 140, English 111A, 111B, 111C, Greek 130, Hebrew 125, 130, 135, 188FL, Study of Religion M186A, M186B, M186C, Semitics 130, 141, 142.

A maximum of 8 units of special studies courses (197, 198, 199) approved by the department may be applied toward the major. Each course must be taken for a letter grade.

Study Abroad
Students are encouraged to spend time abroad either to (1) study with an education abroad program or (2) work on a UCLA-affiliated archaeological excavation in the broader Middle East. For information on studying abroad, contact the Education Abroad Program, 1332 Murphy Hall, 310-825-4995; for UCLA-affiliated excavations, contact the departmental academic counselor at 310-825-4165.

Arabic BA
Preparation for the Major
Required: Arabic 1A, 1B, 1C, and History 9D or Middle Eastern Studies 50C.

Transfer Students
Transfer applicants to the Arabic major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of Arabic.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major
Required: Eleven courses, including (1) Arabic 102A and 102B and 102C or 108, 150 or M151, Islamic Studies M110 and (2) six courses from Anthropology M166Q, Arabic 103A, 103B, 103C, 105, M106, M107, M110, M111A, M111B, M111C, 112A, 112B, 112C, 115, 116A, 116B, 116C, M120, M123, M130, 132, C141, 142, M148, 150 or M151 (unless taken under item 1), M155, M171, 180, 181, Art History 119A, 119B, C120, Comparative Literature 100, History 105A, 105B, 105C, M106, M106B, M111A, M111B, M111C, Islamic Studies 130, 151, Political Science 132A, M132B, 157, 165. No more than one course may be credited through a proficiency test administered by the department. No more than two upper-division 4-unit independent study or directed research courses (197, 199) may be applied toward the major. Other courses, including extra-departmental courses, may be applied with consent of the adviser.

Iranian Studies BA
Students majoring in Iranian Studies may combine the major with specialization in other fields to enhance their career opportunities. Due to the number of additional courses required, they are advised to consider this option early in their academic career.

Preparation for the Major
Required: Iranian 1A, 1B, 1C, or equivalent.

Transfer Students
Transfer applicants to the Iranian Studies major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of Persian.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major
Required: Eleven courses, including seven in Iranian language and civilization selected from Ancient Near East CM163, Iranian 102A, 102B, 102C, 103A, 103B, 103C, M110A, M110B, M110C, 120, 140, 141, 142, 161A, 161B, 161C, 170 (at least three of the seven must be selected from Iranian 102A, 102B, 102C, 103A, 103B, 103C, 120, 140, 141, 142) and four elective courses from the department or from Art History 119A, 119B, C120, History 105A, 105B, 105C, Political Science 157. A maximum of two Iranian 197 or 199 courses (8 units total) may be applied toward the major.

Jewish Studies BA
Preparation for the Major
Required: Jewish Studies M10 or two courses selected from Ancient Near East 10W, Middle Eastern Studies M50A, M50B, 50C and demonstrated proficiency equivalent to level 3 at UCLA in one foreign language (Arabic, Armenian, Hebrew in consultation with the department.

Transfer Students
Transfer applicants to the Jewish Studies major with 90 or more units must complete the following introductory course prior to admission to UCLA: one social, cultural, and religious institutions of Judaism course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major
Required: Eleven courses, including (1) three selected from Hebrew 102A, 102B, 102C, 103A, 103B, 103C, 110A, 110B, 111A, 111B, 111C, 120, 125, 130, 135, C140—students may substitute another upper-division language (Judeo-Arabic, Judeo-Persian, Ladino, Yiddish) if they can demonstrate its integral role in their specific course of study, (2) two courses selected from Jewish Studies M182A, M182B, M182C, M184A, and (3) six elective courses selected from Hebrew or Jewish studies or from Ancient Near East M135, English 111A, 111C, German 109, History 191F, Iranian 130, 131, Political Science 121A, 132A, M132B, Semitics 130, Study of Religion 120, Yiddish 101A, 101B, 101C, 102A, 102C, 121A, 121B, 121C, 130, 131A, 131B, 131C.

Students are encouraged to take a research tutorial within Jewish Studies 197 or 199. A maximum of two 197 or 199 courses (8 units total) may be applied toward the major.

Study in Israel
Students are encouraged to spend up to one year in Israel either to (1) study with an education abroad program or (2) study at an Israeli university. For information on studying in Israel, contact the Education Abroad Program, 1332 Murphy Hall, 310-825-4899.

Middle Eastern Studies BA
Preparation for the Major
Required: Two courses selected from Ancient Near East 10W, History 9D, Middle Eastern Studies M50A, M50B, 50C and demonstrated proficiency equivalent to level 3 at UCLA in one modern Middle Eastern language (Arabic, Armenian, Hebrew, Persian, Turkish) or through a departmental language placement examination. Students selecting ancient languages (including Akkadian, Aramaic, Coptic, Egyptian, Old or Middle Iranian, Sumerian, Syriac) are not required to take a modern elementary Middle Eastern language.
Transfer Students
Transfer applicants to the Middle Eastern Studies major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of Arabic, Armenian, Hebrew, Persian, Turkish, or another modern middle Eastern language.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major
Students must complete 11 courses as follows:

Required Core Courses: A total of six courses, including at least two from three of the following four areas:


Students may petition to substitute a core or elective course with a departmental independent study/directed research course (197, 198, or 199) as long as it covers a topic relevant to Middle Eastern studies. No more than two 197, 198, or 199 courses (8 to 10 units) may be applied toward the major.

Study Abroad
Students are encouraged to spend time abroad either to (1) study with an education abroad program or (2) work on a UCLA-affiliated archaeological excavation in the broader Middle East. For information on studying abroad, contact the Education Abroad Program, 332 Murphy Hall, 310-825-4888; for UCLA-affiliated excavations, contact the departmental academic counselor at 310-825-4165.

Ancient Near East and Egyptology Minor
To enter the Ancient Near East and Egyptology minor, students must have an overall grade-point average of 2.0 or better and file a petition in 378 Humanities Building, 310-825-4165.

Required Lower-Division Courses (10 units): Ancient Near East 10W, 15, Middle Eastern Studies M50A, M50B, M50C.


A maximum of 4 graded units of special studies courses (197, 198, 199) approved by the adviser may be applied toward the minor. No course for the minor or preparation for the minor may be taken on a P/NP grading basis.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Arabic and Islamic Studies Minor
The Arabic and Islamic Studies minor is designed for students who wish to augment their major program with a group of related courses that provide a systematic introduction to the study of Arabic language and literature.

To enter the minor, students must have an overall grade-point average of 2.0 or better and file a petition in 378 Humanities Building, 310-825-4165.

Required Lower-Division Courses (15 units): Arabic 1A, 1B, 1C, or 4A, 4B, 4C, or equivalent.

Required Upper-Division Courses (20 units): Five courses from the Armenian section of the department; 199 courses may not be applied. With consent of the undergraduate adviser, two of the five courses may be taken outside the department. Ordinarily, the following courses may be applied: History 107A through 107E, Indo-European Studies M150.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Hebrew and Jewish Studies Minor
To enter the Hebrew and Jewish Studies minor, students must have an overall grade-point average of 2.0 or better and file a petition in 378 Humanities Building, 310-825-4165.

Required Lower-Division Courses (15 units): Hebrew 1A, 1B, 1C, or 8, or equivalent.

Required Upper-Division Courses (20 units): Five courses from the Hebrew or Jewish studies section of the department; 199 courses may not be applied. With consent of the undergraduate adviser and based on course content, two of the five courses may be taken outside the department.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.
Iranian Studies Minor

To enter the Iranian Studies minor, students must have an overall grade-point average of 2.0 or better and file a petition in 378 Humanities Building, 310-825-4165.

Required Lower-Division Courses (10 to 11 units): Iranian 1C or 20C or equivalent and one course from Middle Eastern Studies M50A, M50B, or S50.


A maximum of 4 units of special studies courses (197, 198, 199) approved by the adviser may be applied toward the minor. No course for the minor may be taken on a P/NP grading basis.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Middle Eastern Studies Minor

The Middle Eastern Studies minor is designed for students who wish to augment their major program in the College of Letters and Science with a group of related courses from various linguistic, literary, archaeological, and historical disciplines of the Near East, from ancient Egypt, Mesopotamia, and biblical studies to the modern Arabic, Iranian, Jewish, and Turkish world.

To enter the minor, students must have an overall grade-point average of 2.0 or better and file a petition in 378 Humanities Building, 310-825-4165.

Required Lower-Division Courses (9 to 10 units): Two courses selected from Ancient Near East 10W, History 9D, Middle Eastern Studies M50A, M50B, S50.

Required Upper-Division Courses (20 units): A total of five courses, including at least three from one of the following four areas:


Students may not substitute a core or elective course with a departmental independent study/directed research course (197, 198, or 199).

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Near Eastern Languages and Cultures offers Master of Arts (MA), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Islamic Studies and in Near Eastern Languages and Cultures.

Ancient Near East

See Semitics for Akkadian, Aramaic, Phoenician, Syrian, and Ugaritic courses.

Lower-Division Courses

10W. Jerusalem: Holy City. (S) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3. Not open for credit to students with credit for course 12W. Survey of religious, political, and cultural history of Jerusalem over three millennia as symbolic focus of three faiths: Judaism, Christianity, and Islam. Transformation of sacred space as reflected by literary and archaeological evidence through examination of testimony of artifacts, architecture, and iconography in relation to written word. Study of creation of mythic Jerusalem through event and experience. Satisfies Writing II requirement. Letter grading.

12W. Jerusalem: Holy City. (S) Seminar, four hours. Enforced requisite: English Composition 3. Not open for credit to students with credit for course 10W. Survey of religious, political, and cultural history of Jerusalem over three millennia as symbolic focus of three faiths: Judaism, Christianity, and Islam. Transformation of sacred space as reflected by literary and archaeological evidence through examination of testimony of artifacts, architectural monuments, and iconography in relation to written works. Study of creation of mythic Jerusalem through event and experience. Development of advanced writing skills and critical thinking. Satisfies Writing II requirement. Letter grading.

14W. Medicine, Magic, and Science in Ancient Times. (S) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3. Overview of history of medicine and sciences, focusing especially on Ancient Near East, China, and Meso-America. Satisfies Writing II requirement. Letter grading.

15. Women and Power in Ancient World. (S) Lecture, four hours; discussion, one hour. Examination of how feminine power confronts masculine dominance within complex social systems in ancient world. To gain political power, some female rulers used their sexuality to gain access to important men. Other women gained their position as regents and helpers of masculine kings who were too young to rule. Others denied their gender and manner, effectively androgynizing themselves or pretending to be men so that their femininity would not be obstacle to political rule. Many women only gained throne at end of dynasties after male line had run out entirely, or in midst of civil war when patrilineal successions were in disarray. Women were sometimes only effective leaders left in drawn-out battles against imperial aggression. No women were able to gain reigns of power through their bloodlines alone. Women’s power
was compromised from outset. Examination of root causes and results of this political inequality, P/NP or letter grading.

M50A. First Civilizations. (8) (Same as Middle Eastern Studies M50A.) Lecture; three hours, discussion; one hour. Overview of history of Near East—Egypt, Israel, and Mesopotamia—with attention to emergence of writing, monotheism, and urban societies. Letter grading.

M50B. Origins of Judaism, Christianity, and Islam. (5) (Same as Middle Eastern Studies M50B and Religion M50.) Lecture; three hours; discussion; one hour. Examination of three major monotheisms of Western cultures—Judaism, Christianity, and Islam—historically and ideologically, with emphasis on theological differences, rituals, and practices of each tradition up to and including medieval composition. Development and development of various sacred texts, highlighting key themes and ideas within different historical and literary strata of traditions, such as mechanisms of revelation, struggle for religious authority, and common theological issues such as origin of evil and status of nonbelievers. Letter grading.

Upper-Division Courses

CM101A. Art and Architecture of Ancient Egypt, Predynastic Period to New Kingdom. (4) (Same as Art History M110A.) Lecture, three hours. Study of architecture, sculpture, painting, and minor arts from New Kingdom to Predynastic period and Old Kingdom. May be repeated for credit with consent of instructor. Concurrently scheduled with course C267A. P/NP or letter grading.

CM101B. Art and Architecture of Ancient Egypt, New Kingdom to Greco-Roman Period. (4) (Same as Art History M110B.) Lecture, three hours. Study of architecture, sculpture, painting, and minor arts from New Kingdom to Greco-Roman period. Concurrently scheduled with course C267B. P/NP or letter grading.

M101C. Ancient Egyptian Temple and City of Thebes. (4) (Same as Art History M110C.) Lecture, four hours; fieldwork, one hour. Focus on ancient temples of city of Thebes (modern day Luxor). Theban temples are some of best-preserved cult buildings in all of Egypt, and their study illuminates traditions of artistic representation, architectural development, and social and political transformations echoed throughout all of ancient Egypt. Investigation of ritual linking of temples on Nile’s eastern and western banks through festival procession lines, study of layout and function of Theban temples through time, and statuary on Nile’s eastern and western banks through festival.

CM103A-M103B. History of Ancient Egypt. (4-4) (Same as History M103A-M103B.) Lecture, three hours; discussion. The course is offered when scheduled. Course M103A is not requisite to M103B. Designed for juniors/seniors. Political and cultural institutions of ancient Egypt and ideas on which they were based. P/NP or letter grading.

M103A. Hieroglyphic Writing. (4) (Same as History M103A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Hieroglyphic writing and its development in ancient Egypt. Emphasis on technical aspects of hieratic and demotic scripts.

M103B. Middle Egyptian Technical Literature. (4) Lecture, three hours. Reading of authentic Egyptian texts to acquire familiarity with aims and methods of philology, study of ancient texts.

M121A-121B-121C. Intermediate Ancient Egyptian Readings. (5-5-5) Lecture, three hours. Requisite: course 120C. Course 121A is requisite to 121B, which is requisite to 121C. Thematic readings in ancient Egyptian historical, religious, and literary texts. May be repeated for credit. P/NP or letter grading.

M122. Elementary Egyptian Intensive. (12) Formerly numbered 8.) Lecture, 10 hours; discussion, 10 hours. Not open to students who have learned, from whatever source, enough Egyptian to qualify for more advanced courses. Course is not requisite to courses 120A, 120B, and 120C.

M125A. Digital Cultural Mapping Core Course A: Google Earth, Geographic Information Systems, Humanities, Form and Time. (4) (Same as Architecture and Urban Design M125A.) Laboratory, three hours; discussion, one hour. Enforced requisite: course 125A. Hands-on laboratory-based investigation, including instruction in Web-based mapping applications, virtual globes, and geographic information systems (GIS). Critique and creation of maps of cultural phenomena, applying skills learned in course 125A to real-world data sets in humanities and social sciences. By mastering emerging technologies in field of digital cultural mapping, students take part in visualization and production of visual representations of complex data, becoming active participants in development of this new field. How to use suite of GIS and georegographic tools. Fostering of creative approaches to and engagement with mapping technologies: What new questions can be asked and answered using these technologies? How does one reason, argue, and solve real-world problems through digital cultural mapping? Design, development, and implementation of student mapping-based research projects. Part of Digital Cultural Mapping Project supported by W.M. Keck Foundation. P/NP or letter grading.

M125C. Digital Cultural Mapping Core Course C: Summer Research. (4) (Same as Architecture and Urban Design M125C.) Laboratory, three hours; fieldwork, one hour. Enforced requisite: course M125B or Architecture and Urban Design M125B. Participation in collaborative geographic information systems (GIS) research project in humanities or social sciences using skills learned in courses 125A and M125B. Enrolled students acquire input of real-world sources, creating visual representations of data through production of digital maps, and performing analysis of larger dataset to answer specific research questions. Final oral presentations and digital maps created by student work and provides critical analysis of source material and technological/methodological issues in relation to systematic GIS research and for investigating contemporary social and cultural problems. Digital Cultural Mapping Project supported by W.M. Keck Foundation. Offered in summer only. P/NP or letter grading.

M130. Ancient Egyptian Religion. (5) (Same as Religion M130.) Lecture, three hours; discussion, one hour. Introduction to religious beliefs, practices, and sentiments of ancient Egypt to study Egyptian religion as coherent system of thought and sphere of action that was served as means to understand and come to know reality by structuring world and organizing knowledge about it. Part of Digital Cultural Mapping Project supported by W.M. Keck Foundation. Offered in summer only. P/NP or letter grading.

M135. Religion in Ancient Israel. (4) (Same as Religion M135.) Lecture, three hours. Introductory survey of various ancient Israelite religious beliefs and practices, their origin, and development, with special attention to diversity of religious practice in ancient Israel and Canaan during first millennium B.C.E. P/NP or letter grading.

CM140A-CM140C. Elementary Semitician. (4-4-4) Lecture, three hours. Requisites: Semitics 140A, 140B. Elementary grammar and reading of royal inscriptions, letters, and administrative texts from Ur III period. P/NP or letter grading.
150A-150B. Survey of Ancient Near Eastern Literatures in English. (4-4) Lecture, three hours. Each course may be taken independently for credit. P/NP or letter grading. 150A. Mesopotamia; 150B. Egypt. Preparation: familiarity with Egyptian history. Enforced prerequisites: courses 111A, 110B. Survey of 3,000 years of ancient Egyptian literature. Reading of Egyptian texts in translation to study Egypt’s intellectual history and trace transformations in its construction of cultural identity. Topics include invention of writing, autobiography, wisdom texts, narratives, royal inscriptions, and hymns. Discussion of text analysis such as narratology.

160A. Linear B. (Same as Classics M167.) Lecture, three hours; discussion, one hour. Recommended preparation: knowledge of language with case system. Introduction to Linear B grammar by series of graded lessons covering morphological and syntactical aspects of Linear B. Students work with readings of selected texts from variety of genres in transliteration. P/NP or letter grading.


162. Archaeology, Identity, and Bible. (4) Lecture, three hours. A historical archaeology of southern Levant (ancient Israel) from Bronze Age through Achaemenid Period (ca. 2500-332 B.C.E.). Development of ancient Israelite identities traced through combination of archaeological and textual sources. Cultural customs of ancient Israel and Judah, including social, religious, and political traditions, traced out of and compared with earlier Bronze Age traditions and Israel’s Iron Age neighbors. Architecture and textual data for identi- ties, such as Amorites, Canaanites, Phoenicians, Egyptians, Assyrians, and Babylonians, form basis for evaluating construction and maintenance of Israelite and Judean identities. Introduction to theoretical and methodological issues involving historical archaeology of ancient Israel and Levant, and investigation of identity in archaeological record. P/NP or letter grading.

CM163. Archaeology of Iran. (4) (Formerly numbered C163.) (Same as Iranian CM163.) Lecture, three hours. Designed to introduce students to Iranian ar- chaeology from prehistoric through Achaemenid times. Concurrently scheduled with course CM259. P/NP or letter grading.

C165. Egyptian Archaeology. (4) Seminar, three hours. Opportunity to research aspects of topics in ancient Egyptian archaeology. Topics vary each year. May be repeated for credit. Concurrently scheduled with course C265. P/NP or letter grading.

166. Art and Death in Ancient Egypt. (4) Seminar, two hours. Ways of death, burial, funerary ritual, and afterlife. How did Egyptians, as well as ancient Near East and Nubia, with focus on ancient visual mate- rials—both objects and architecture—from Predynastic to Roman periods. P/NP or letter grading.

M167. Magic in Ancient World. (4) (Same as Classics M167.) Lecture, three hours; discussion, one hour (when scheduled). Prerequisite: Classics 10 or 20. Exploration of art of influencing natural course of events by occult means practiced in ancient world at large. Coverage of beliefs in supernatural forces, rites aimed at controlling these forces effectively, and character and social roles of ritual experts in various cultures. Source material includes types of magical spells, literary texts about magic and magicians, and artifacts such as amulets and ritual implements. P/NP or letter grading.

M168. Introductory Hittite. (4) Same as Indo-Euro- pean Studies M168L) Lecture, two hours; recitation, one hour. Recommended preparation: knowledge of language with case system. Introduction to Hittite grammar by series of graded lessons covering mor- phology and syntax, followed by readings of selected texts from variety of genres in transliteration. P/NP or letter grading.

CM169. Introduction to Archaeological Sciences. (4) (Same as Anthropology CM110C) Lecture, three hours. Survey of research methods and techniques throughout field of archae- ology to implement them and to appreciate and evalu- ate results of their use by others who have em- bedded them in their scholarly publications or theo- retical models. Systematic instruction in digital data management and mining, scientific analysis of mate- rials (including geological and biochemical tech- niques), and visual presentation of data and research results for visualization of data, and its representation to virtual reality. Concurrently scheduled with course CM269. P/NP or letter grading.


C177. Variable Topics in Ancient Near East. (4) Lecture, three hours; discussion, one hour. Variable topics; consult Schedule of Classes for topics to be offered in specific term. Concurrently scheduled with course C277. P/NP or letter grading.

M185D. Religions of Ancient Near East. (4) (Same as History M185D and Religion M185D) Lecture, three hours; discussion, one hour (when scheduled). Devoted to anthropological and historical analysis of religious sys- tems of ancient Near East, with emphasis on Mesop- otamia and Syria and with reference to religion of an- cient Israel; varying concepts of divinity, hierarchies of gods, visions, cult, magic, rituals, and moral conduct. P/NP or letter grading.

197. Individual Studies in Ancient Near East. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Indi- vidual intensive study, with scheduled meetings to be arranged between faculty member and student. As- signed reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

190. Directed Research or Senior Project in An- cient Near East. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Supervised individual research or in- vestigation under guidance of faculty mentor. Culmi- nating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

M201. Archaeological Research Design. (4) (Same as Archaeology M201A, M201B) How to design ar- chaeological projects in preparation for MA thesis or PhD phase. Students do exploratory research to se- lect subject, design that could form basis for extensive paper, grant application, or oral examination. Students work closely with faculty members and report weekly on their progress. Prepa- ration of research reports-presentations, one on theoretical framework and one on prac- tical aspects of project. Final written research design that incorporates theoretical and practical aspects of research and formulates bridging arguments required. S/U or letter grading.

M208. Topics in Ancient Iranian History. (4) (Same as History M210 and Iran M210.) Seminar, three hours. Varying topics on Elamite, Achaemenid, Ar- sacid, and Sasanian history. May be repeated for credit. S/U or letter grading.

210. Late Egyptian. (4) Lecture, three hours. Requi- site: courses 121A, 121B, 121C. Late Egyptian grammar and reading of both hieroglyphic and hier- atic texts. May be repeated for credit. S/U or letter grading.

211A-211B. Egyptian Texts of Greco-Roman Peri- od. (4-4) Lecture, three hours. Introduction to grammar and orthography of hieroglyphic texts from Greco-Roman times. Text readings and translation of various textual types. Letter grading.

215. Readings in Middle Kingdom Literature. (4) Seminar, three hours. Enforced prerequisites: courses 120H, 120B, 120C. Survey of Middle Kingdom litera- ture through close readings of texts in original lan- guage and evaluation of current scholarship on these texts. Students hone their knowledge of Middle Egypt- ian grammar and become familiar with philosophical methods in study of Egyptian literature. S/U or letter grading.

220. Seminar: Ancient Egypt. (4) Seminar, three hours. May be repeated for credit. S/U or letter grading.

221A-221B. Demotic. (4-4) Lecture, three hours. Prerequisite: course 121C. Course 221A is requisite to 221B. Introduction to Demotic grammar and orthog- raphy. Reading of texts from various genres. May be repeated for credit with topic change. S/U or letter grading.

C223A-C223B. Coptic. (5-5) Lecture, three hours. Introduction to Coptic, final phase of Egyptian lan- guage, which is attested in writing from circa 300 to 1500 CE. Concurrently scheduled with courses C121A-C121B. S/U or letter grading. C223A. Devoted to learning Coptic alphabet, grammar, and vocabulary (Sahidic dialect), with particular emphasis on histor- ical linguistics. C223B. Prerequisite: course C223A. In- troduction to variety of Coptic textual genres, from hagiographies to homilies, magical spells, private let- ters, legal contracts, and Gnostic Gospels found in Nag Hammadi. Readings in texts in dialects other than Sahidic (Bohairic, Fayumic, Akhmimic).

230. Seminar: Ancient Syria/Palestine. (4) Seminar, three hours. Examination of selected topics on polit- ical, social, and intellectual history of ancient Israel. Exploration of how historical and critical con- textual texts shaped and influenced interpretation and use of biblical texts. May be repeated for credit. S/U or letter grading.

C240B-240C. Seminars: Sumerian Language and Literature. (4-4) Seminar, two hours. Readings of texts from various Sumerian periods and literary genres; selected problems in linguistic or stylistic analysis and literary history. Concurrently scheduled with course CM259. Archaeology of Iran. (4) (Formerly numbered C259.) (Same as Iranian CM259.) Lecture, three hours. Designed to introduce students to Iranian ar- chaeology from prehistoric through Achaemenid times. Concurrently scheduled with course CM163. S/U or letter grading.

260. Seminar: Ancient Near Eastern Archaeology. (2 to 4) Seminar, two hours. May be repeated for credit. S/U or letter grading.

261. Practical Field Archaeology. (2 to 8) Fieldwork, two hours. Participation in archaeological excavations or other archaeological research in Near East under staff supervision. May be repeated for credit. S/U or letter grading.

262. Seminar: Object Archaeology. (4) Seminar, two hours; laboratory, one hour. Selected topics in anal- ysis and interpretation of Near Eastern archaeological finds in museum collections. Students work with ob- jects in Hearst Museum of Anthropology and Angeles County Museum of Art. S/U or letter grading.

263. Seminar: Egyptian Monuments. (4) Seminar, two hours. Selected monuments and sites in Egypt, including Delta, Nile Valley, desert sites, wads, oases, and border regions. Architecture and decoration of temples and tombs, statuary and monuments, settle- ment and use history, text translation of appropriate documents, including stelae, monumental inscrip- tions, or pertinent papyri and ptolemaic texts. May be re- peated. S/U or letter grading.

264. Egyptian Museum Collections. (4) Seminar, two hours; research group meeting, one hour. Ancient Egyptian Museum collections, data sets, provenance and dating studies, collection history and agenda, museology, and exhibition history. May be repeated for credit with consent of instructor. S/U or letter grading.

M265. Depositional History and Stratigraphic Analysis. (4) (Same as Archaeology M265,) Lecture, two hours. Theoretical understanding of depositional processes ("laws") which lead to site formation and of methods and techniques of project. Final written research design that incorporates theoretical and practical aspects of research and formulates bridging arguments required. S/U or letter grading.

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Upper-Division Courses

102A-102B-102C. Intermediate Standard Arabic. (4-4-4) Lecture, four hours. Enforced requisite: course 1C or B. Course 102B, which is requisite to 102C, not open to students who have learned from whatever source, enough Arabic to qualify for more advanced courses. Intermediate Formal Arabic, including listening, speaking, reading, and writing. P/NP or letter grading.

103A-103B-103C. Advanced Arabic. (4-4-4) Lecture, four hours. Enforced requisites: courses 102A, 102B, 102C. Not open to students who have learned from whatever source, enough Arabic to qualify for more advanced courses. Advanced formal Arabic, including grammar, composition, and readings from classical and modern texts. P/NP or letter grading.

105. Introduction to Qur’anic and Islamic Arabic. (4) Lecture, three hours. Requisites: courses 1A, 1B, 1C. Introduction to Arabic used in Qur’an, Hadith (traditions of Prophet Muhammad), and early Islamic literature (biographies of Prophet and historical narratives). P/NP or letter grading.


107. Islam in West. (4) Same as Islamic Studies M107. Lecture, three hours. Introduction to one spoken dialect of Arabic. P/NP or letter grading.

110. Thousand and One Nights/Alf Layla Wa Layla. (4) Same as Comparative Literature M110. Lecture, three hours. Exploration of conjunctions between contemporary Arab film and song and between popular cultures and cultures of commitment (iltizam), with possible focus on specific genres such as realism/ neorealist Arab film; feminist Arab film or popular Arab film and song; topics such as nation, gender, and representation or democracy and human rights or censorship, reception, and resistance. Possible examination of various national cinemas such as Tunisian, Egyptian, Moroccan, Algerian, and Palestinian. Various musical genres such as Rai, Mizoued, and Hip hop also examined in relation to emergence not only of national cinemas, national music industries, and iconic singers but also of video clip, satellite TV, star academy, and reality shows—all products of transnational and pan-Arab mass media. P/NP or letter grading.

111A-111B-111C. Elementary Spoken Egyptian Arabic. (4-4-4) Lecture, three hours. Enforced requisite: course 111A is enforced requisite to 111B, which is enforced requisite to 111C. Not suitable for heritage speakers. Introduction to spoken Arabic dialect of Egypt. Formal Arabic, including listening, speaking, and reading. P/NP or letter grading.

111S. Summer Intensive Elementary Egyptian Arabic. (4) Lecture, three hours. Knowledge of Arabic not required; not suitable for heritage speakers. Introduction to spoken Arabic dialect of Egypt. Formal Arabic, including listening, speaking, and reading. P/NP or letter grading.

112A-112B-112C. Advanced Spoken Egyptian Arabic. (4-4-4) Lecture, three hours. Study of Egyptian colloquial Arabic for heritage speakers or students who have completed courses 1A, 1B, 1C. P/NP or letter grading.

115. Studies in Arabic Dialectology. (4) Lecture, three hours. Introduction to one spoken dialect of Arabic, with emphasis on speaking and listening comprehension. Dialects vary from year to year based on student interest and instructor availability and may include Iraqi, Levantine, North African, or Gulf Arabic. May be repeated for credit. P/NP or letter grading.

116A-116B-116C. Elementary Iraqi Arabic. (5-5-5) Lecture, five hours. Course 116A is requisite to 116B, which is requisite to 116C. Introduction to dialect of Arabic spoken in contemporary Iraq, with emphasis on conversational proficiency. Recognition and production of sounds of Iraqi Arabic and basic vocabulary, grammar, and idiosyncratic usage and relevant cultural background through dialogues and other conversational exercises. P/NP or letter grading.

120. Islamic Texts. (4) Lecture, four hours. Requisite: course 103C. Readings from Qur’an, Tafsir, Hadith, Fiqh. May be repeated for credit. Letter grading.


130. Classical Arabic Texts. (4) Lecture, four hours. Requisite: course 103C. Readings from premodern literary texts, with grammatical and syntactical analysis. May be repeated for credit. Letter grading.

132. Philosophical and Kalam Texts. (4) Lecture, three hours. Requisite: course 103C. Examination of premodern philosophy and theology. May be repeated for credit. P/NP or letter grading.

C141. Modern Arabic Literature. (4) Lecture, three hours. Requisite: course 103C. Conducted in English and Arabic, with all required readings in original Arabic only. Readings in modern Arabic literature, variably organized across or around particular trends, genres, topics, canonical authors, regional, or national literatures, mixing theoretical and formal analyses of literary and critical texts and making use of film, video-clip, and song in approaching literary culture. May be repeated for credit. Concurrently scheduled with course C241. Letter grading.

142. Arab Media. (4) Lecture, four hours. Requisite: course 103A. Development of facility with language of Arabic press and broadcasting. Activities include monitoring current materials via Internet; transcribing, translating, and summarizing; writing original reports in Arabic; and oral presentations and discussions. May be repeated for credit. P/NP or letter grading.

M148. Contemporary Arab Film and Song. (4) Same as Comparative Literature M148. Lecture, three hours. Exploration of conjunctions between contemporary Arab film and song and between popular cultures and cultures of commitment (iltizam), with possible focus on specific genres such as realism/ neorealist Arab film; feminist Arab film or popular Arab film and song; topics such as nation, gender, and representation or democracy and human rights or censorship, reception, and resistance. Possible examination of various national cinemas such as Tunisian, Egyptian, Moroccan, Algerian, and Palestinian. Various musical genres such as Rai, Mizoued, and Hip hop also examined in relation to emergence not only of national cinemas, national music industries, and iconic singers but also of video clip, satellite TV, star academy, and reality shows—all products of transnational and pan-Arab mass media. P/NP or letter grading.

150. Classical Arabic Literature in English. (4) Lecture, three hours. Readings in English; knowledge of Arabic not required. Survey of premodern Arabic cultural production in its historical and social contexts. Coverage of pre-Islamic Arabia, rise of Islam, and major themes of Southwest Asian history, along with significant figures and moments in literature and culture of premodern period. Consideration of selected modern responses to Arabic tradition. P/NP or letter grading.

M151. Modern African Arabic Language. (4) Same as Comparative Literature M151. Lecture, three hours. Designed for upper-division literature majors. Topics may include constructions of otherness in modern Arab culture; East-West debate;
memory, trauma, and mourning; violence, narrative, and ethics; globalization, oil, and cultural industries. Arabic culture in transnational context or questions of reception, exoticism, translation, and marketing. Genres may include prison narratives; novel of terror; memoirs by women and/or by refugees and exiles; 19th- and 20th-century travel narratives; Arabic romantic poetry; literature of pre-1948; rise of Arab novel. Areas may range from generic look at Arab world to focus on a specific country such as Algeria, Palestine, Iraq, Lebanon, or Egypt. May also be organized around Arab literatures written in one specific language, namely English, Arabic, or French. Letter grading.

M155. Al-Andalus: Literature of Islamic Spain. (4) (Same as Comparative Literature M119.) Lecture, three hours. Study of Arabic Islamic Spain to learn about interaction of Arabic and Western and Ar- abic and Jewish cultures and to recognize Islamic cul- ture as vital force in European life and letters. P/NP or letter grading.

M171. Culture Area of Maghreb (North Africa). (4) (Same as Anthropology M166Q and History M198C.) Lecture, three hours. Designed for juniors/seniors. In- troduction to North Africa, especially Morocco, Al- geria, Tunisia, and Libya, also known as Maghrib or Maghreb; focus on changing notions of per- sonal, tribal, ethnic, linguistic and religious identities; colonialism; gender and legal rights, changing repre- sentations of Islam, and religions in region’s public space. S/U or letter grading.

180. Linguistic Analysis of Arabic. (4, 4) Lecture, four hours. Requisite: course 102C. Linguistic description of Arabic in both its modern standard and dialect forms. Introduction to linguistic analysis of Arabic phonology, morphology, and syntax and to linguists’ approaches to specific problems posed by Arabic grammar and dialectology. Letter grading.


180FL. Special Studies: Readings in Arabic. (2) Seminar, two hours. Requisite: course 102C. Students must be concurrently enrolled in affiliated main course. May be taken independently for credit and may be repeated for maximum of 24 units. S/U or letter grading.

197. Individual Studies in Arabic. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Individual inten- sive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and projects to assure competence of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research or Senior Project in Ara- bic. (2 to 4) Tutorial, one hour. Limited to juniors/sea- niors. Supervised individual research or investigation under guidance of faculty mentor. Cumulating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

220. Seminar: Islamic Texts. (4) Seminar, three hours. Major Islamic thinkers and their works from classical period to modern times. Coverage of doc- trines, concepts, and important works of famous scholars in different fields of Islamic thought, such as Ahi al-sunnah wa-l-jama’a, Shi’a, Mu’tazila, and Sufis. May be organized around one author and his works, multiple authors and their works, or specific topic with representative readings from various sources. Exploration of secondary liter- ature in Arabic and other languages for student re- search papers. May be repeated for credit. S/U or letter grading.

M223. Topics in Judeo-Arabic. (4) (Same as Hebrew M231.) Lecture, three hours. Requisites: course 102C, Hebrew 102C. Reading of Judeo-Arabic texts by Mal- monides (medieval religion, medicine, philosophy) and more recent texts in Judeo-Arabic dialects of Iraq and Egypt. Topics: grammar and varia- tions from norms of classical Arabic. S/U or letter grading.

240A. Seminar: Arab Historians. (4) Seminar, three hours. Study of history of Arabic and medieval Islamic history. Selected readings in Arabic that represent cross-section of Islamic historical writ- ings, including Ibn Ishaq’s Sirr, Waqdi’s Maghazi, Badhun’s Futuh, Ta’rikh al-Thawri, Nihayat al-qiyas of Ya’qubi and Mas’udi, Ibn Khaldun’s Muqaddamah, and Ma- qurdi’s topography. Historians studied either to deter- mine their reliability as sources or their view of history and its theoretical foundations. Exploration of sources, research tools, and problems in Islamic his- tory. May be repeated for credit. S/U or letter grading.

240B. Seminar: Arab Geographers. (4) Seminar, three hours. Introduction to large body of literature on medieval Islamic geography. Topics: selected readings in Arabic that represent cross-section of Islamic geo- graphical writings distributed over number of disci- plines and various aspects of geography, such as Surat al-anbiya, al-Maslak wa’l-Mudallal, al-Ghubah, and al-Ghubah wa’l-Mudallal, topography, and travel accounts. May be repeated for credit. S/U or letter grading.

C241. Modern Arabic Literature. (4) Lecture, three hours. Requisite: course 102C. Conducted in Arabic and with all required readings in original Ar- abic only. Readings in modern Arabic literature, vari- ably organized across and around particular genres, topics, canonical authors, regional, or national literatures; may include productions of litera- rian and critical texts and making use of film, videoclip, and song in approaching literary culture. May be repeated for credit. S/U or letter grading.

250. Seminar: Premodern Arabic Literature. (4) Seminar, three hours. Readings in Arabic texts from variety of periods and genres, along with appropriate secondary literature. Topics: pre-Islamic poetry and oratory, Qur’an, Umayyad and Abbasid po- etry and literary prose, Hadith and Fiqh, historiog- raphy, biography, geography, medicine, mathematics, theology, astrology, mysticism. May be repeated for maximum of 24 units. S/U or letter grading.

251. Seminar: Modern Arabic Literature. (4) Sem- inar, three hours; discussion, one hour. Requisite: course C141. Selected topics in modern and contem- porary Arab writing and poetry. May be repeated for credit. Letter grading.

M255. Literatures and Cultures of Maghreb. (4) (Same as Comparative Literature M251.) Seminar, three hours. Limited to graduate students. Examina- tion of traditionally diverse literatures of Maghreb in their multiple and competing contexts of language and gender politics, religious and cultural formations. Past and present. Mecuat’s, the land of疲惫, Tharid-Worldism and economic development, modernity and globalization, immigration and citizenship, soccer in- dustry and Rai music, mass media and Star Academy, Maghreb, and more. Readings of literatures in English and in English translations from different Maghrebian languages (particularly Arabic and French) in conjunc- tion with theories of language and linguistic pluralism, cultural transition, and postcolonial studies. Relevant theories of gender, globalization, and postco- lonial cultural studies. S/U or letter grading.

275. Encountering Arabic Manuscripts: Introduc- tion to Arabic Paleography and Critical Edition of Manuscripts. (4) Lecture, three hours; discussion, one hour. Requisite: course 103C. Introduction to Ar- abic paleography and how to prepare editions of me- dieval manuscripts with critical apparatus and transcriptions. During past decades enormous number of previously unknown Arabic manuscripts have been discovered. While vast range of medieval texts have been published in editions of varying quality, equally large number of manuscripts remain unpublished. UCLA has outstanding collections of Near Eastern manuscripts in Arabic, Persian, and Ottoman Turkish, particularly in fields of Islamic philosophy, law, theology, and history. It is rich in works related to studies of theologians and scholars at different cen- ters of learning in Iran during Safavid period noted for being centre of multiple scientific and linguistic activities. Course opens this treasure to graduate stu- dents interested in editing and/or translating manus- scripts. S/U or letter grading.

M328. Modern Arab Thought. (4) (Same as Com- parative Literature M288.) Seminar, three hours. While much has been written and said about resurgence and spread of political Islam after collapse of ideology of secular nationalism and failure of Arab left to ap- prehend exigencies of postrevolutionary/postcolonial moment, little has been devoted to less sensational topic of modern Arab thought despite unmistakable proliferation of critical output produced by Arab thinkers and artists in aftermath of 1967. Course ad- dresses and redresses this glaring imbalance by con- sidering new cultural material—literary, critical, philo- sophical, artistic, and political—produced before and after al-Nahda but mostly before and after 1967 and fosters insightful approaches to unlikely coexis- tence in Arab contemporaneity of ever-deepening and generalized crisis and of continued and consolidat- ed development (if not effervescence) of cultural and artistic production. S/U or letter grading.

496. Arabic Language Pedagogy Course. (2) Sem- inar, three hours. Taught in English and Arabic. Dis- cussion of multiple teaching methodological lan- guage teaching and learning. Content designed to address Arabic language pedagogy, with emphasis on practical issues and applications of different lan- guage teaching methodologies. Activities include lec- tures, classroom observations, and teaching demon- strations. Participants collaborate on projects that in- vestigate issues related to teaching different language skills, such as listening, speaking, reading, and writing. S/U grading.

596. Directed Individual Study. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U or letter grading.


Armenian

Upper-Division Courses

101A-101B-101C. Elementary Modern Western Ar- menian. (5-5-5) (Formerly numbered 1A-1B-1C.) Lec- ture, five hours. Course 101A is recommended requi- site to 101B, which is recommended requisite to 101C. Students with knowledge of Armenian should contact instructor to determine appropriate enroll- ment level. Armenian grammar, conversation, and ex- ercises. P/NP or letter grading.

102A-102B-102C. Intermediate Modern Western Ar- menian. (5-5-5) Lecture, five hours. Recommended requisites: course 101C. Students with knowl- edge of Eastern or Western Armenian (from elemen- tary or high school) should contact instructor to deter- mine appropriate enrollment level. Reading of selected texts, composition, and conversation. Each course may be taken independently for credit. P/NP or letter grading.

103A-103B-103C. Advanced Modern Western Ar- menian. (4-4-4) Lecture, four hours. Recommended requisites: course 102C. Course 103A is recom- mended requisite to 103B, which is recommended requisite to 103C. Students with knowledge of Eastern or Western Armenian (from elementary or high school) should contact instructor to determine appropriate enrollment level. Students with advanced speaking fluency and reading abilities in Armenian. Exploration of advanced Western Arme-
nian in following areas of competency: fluency, literacy, accuracy, and proficiency. Use of language to engage literary themes and cultural issues of historical and contemporary significance for Armenian speakers. P/NP or letter grading.

104A-104B-104C. Elementary Modern Eastern Armenian. (5-5-5) Formerly numbered 4A-4B-4C. Lecture, five hours. Course 104A is recommended requisite to 104B, which is recommended requisite to 104C. Students with knowledge of Western Armenian should contact instructor to determine appropriate enrollment level. Designed for students with little or no prior knowledge of Eastern Armenian, official idiom of Republic of Armenia. Introduction to basics of grammar and conversation. P/NP or letter grading.

105A-105B-105C. Intermediate Modern Eastern Armenian. (4-4-4) Lecture, five hours. Recommended requisite: course 4C. Students with knowledge of Eastern or Western Armenian (from elementary or high school) should consult instructor to determine appropriate enrollment level. Continuing introduction to Armenian grammar, with greater attention to its two standard varieties (Western and Eastern), then retracing of historical development through formation of New Armenian (17th century), Middle Armenian (17th through 12th centuries), and earliest attestation of literary version of ancient Armenian (11th through 5th centuries). Discussion of attempts at reconstructing major features of Armenian phonology and morphology in preliterary period. P/NP or letter grading.

120. Language in Diaspora: Armenian as a Heritage Language. (4) Lecture, three hours. Requisite: course 1C or 4C. Exploration of history of Armenian language as reflected in literature created in Armenian throughout written period (5th through 20th centuries). Use of top-down approach beginning with modern state of Armenian language in two standard versions (Western and Eastern), then retraction of historical development through formation of New Armenian (17th century), Middle Armenian (17th through 12th centuries), and earliest attestations of literary version of ancient Armenian (11th through 5th centuries). Discussion of attempts at reconstructing major features of Armenian phonology and morphology in preliterary period. P/NP or letter grading.

122. Review of Classical Armenian. (5-5-5) Lecture, three hours. Preparation: reading elementary or high school level. Survey of syntactic and morphological differences between ancient and modern standards of Eastern and Western Armenian (5th to mid-19th century) and modalities by which this has been transformed in course of last two centuries as result of exposure to European thought and expressive forms. Concurrently scheduled with course 225A. P/NP or letter grading.

125. Art, Politics, and Nationalism in Modern Armenian Literature. (4) Lecture, four hours. Examination of role of literature in modern Armenian society in service to cause or causes, as propaganda for various ideologies, as art for art's sake, etc. Exploration of contrasting aesthetics implicit in these differing interpretations. Concurrently scheduled with course 225C. P/NP or letter grading.

129. Armenian Literature as Drama: Vehicle for Social Critique. (4) Lecture, four hours. Requisite: course 104A or 104B or 104C. In-depth study of major figures and works in contemporary Armenian society as agents for social reform. Concurrently scheduled with course 225B. P/NP or letter grading.

130. Armenian Language under Bagratid Dynasty, 884 to 1064. (4) Lecture, four hours. Interdisciplinary investigation of interface between sociopolitical and economic factors in creation of works of art (literature, art, architecture, etc.) and social function these works performed in this important period of Armenian history. P/NP or letter grading.

131. Armenian Civilization in Cilician Period, 1080 to 1375. (4) Lecture, four hours. Interdisciplinary investigation of rise and fall of unique form of Armenian polity established outside homeland and examination of degree to which its social structure and cultural and aesthetic norms were impacted by those of West (Byzantium, Western Europe) and East (Crusader states, Seljuqs, Mamluks, Mongols). Letter grading.


151. Armenian Literature and Canon Formation. (4) Lecture, four hours. Discussion of fundamental themes and genres around which Armenian literary tradition evolved and modalities by which this has been transformed in course of last two centuries as result of exposure to European thought and expressive forms. Concurrently scheduled with course 225B. P/NP or letter grading.

152. Modern Armenian Drama as Vehicle for Social Critique. (4) Lecture, four hours. Readings of selected plays from 1668 to 1992 from three main genres of tragedy, comedy, and serious drama and featuring works by most significant Armenian playwrights, with focus on their role as commentators on contemporary mores and as agents for social reform. Concurrently scheduled with course 225A. P/NP or letter grading.

153. Art, Politics, and Nationalism in Modern Armenian Literature. (4) Lecture, four hours. Examinations of role of literature in modern Armenian society in service to cause or causes, as propaganda for various ideologies, as art for art's sake, etc. Exploration of contrasting aesthetics implicit in these differing interpretations. Concurrently scheduled with course 225A. P/NP or letter grading.

155. Issues in Armenian American Literature and Culture. (4) Lecture, four hours. Preparation: reading knowledge of modern Eastern and Western Armenian. Theoretically informed exploration of some of most salient questions related to Armenian American community as reflected in its literature and other cultural artifacts in interaction with its pluralistic American ambiance. Concurrently scheduled with course 225B. P/NP or letter grading.

156A-156B. Armenian Literature of 19th and 20th Centuries. (4-4) Lecture, three hours. Requisite: courses 102A, 102B, 102C. Reading of texts and discussion of various genres of modern Armenian literature within context of Armenian cultural renaissance. P/NP or letter grading.

161. Armenian Film and Culture. (5) Lecture, six hours. Requisite: course 1C or 4C. Overview of development of Armenian cinematography from first talkie to present, with focus on work of most seminal directors from Armenia. P/NP or letter grading.

166. Armenian Film and Culture. (5) Lecture, six hours. Requisite: course 1C or 4C. Overview of development of Armenian cinematography from first talkie to present, with focus on work of most seminal directors from Armenia. P/NP or letter grading.

170. Armenian Poetry, 1880 to 1930. (4) Lecture, three hours. Requisite: course 1C or 4C. Examination of process behind creation of range and variety of poetic expression that developed in new literary formats and genres of which became standard modern Eastern and Western Armenian language in second half of 19th century. Special attention to crafting of central practitioners' individual voice, with particular consideration to poetics and aesthetics, continuity and innovation under impact of modernism, and employment of poetic structure as medium for expression of deeper philosophical values. All texts read in original language. P/NP or letter grading.

171. Varieties in Armenian Studies. (4) Lecture, three hours. Examination of major issues in Armenian studies. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.

M172. Medieval Armenian Art. (4) Formerly numbered M173.) (Same as Art History M118B.) Lecture, three hours. Examination of cultural and historical impact of Armenian miniature paintings. P/NP or letter grading.

M175. Armenian Painting, 17th to 20th Century. (4) (Formerly numbered M172.) (Same as Art History M118B.) Lecture, three hours. Overview of development of modern Armenian painting out of its matrix in 17th-18th centuries. P/NP or letter grading.

188. Variable Topics in Armenian. (4) Lecture, four hours. Departmentally sponsored experimental or temporary courses, such as those taught by visiting faculty members. May be repeated for credit with topic change. P/NP or letter grading.

197. Individual Studies in Armenian. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research or Senior Project in Armenian. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

230A-230B-230C. Elementary Classical Armenian. (4-4-4) Lecture, three hours. Course 230A is requisite to 230B, which is requisite to 230C. Introduction to grammar of classical literary language (5th to mid-19th century) and guided readings in narrative prose texts. Letter grading.

231A-231B-231C. Intermediate Classical Armenian. (4-4-4) Lecture, three hours. Requisite: course 230A or 231A or 231B or 231C. In-depth reading and linguistic analysis of texts related to Philhellenic School of 6th to 8th century and related works up to 19th century. Each course may be taken independently for credit. Letter grading.

232A-232B-232C. Advanced Classical Armenian. (4-4-4) Lecture, three hours. Requisite: course 231A or 231B or 231C. In-depth reading and linguistic analysis of texts related to Philhellenic School of 6th to 8th century and related works up to 19th century. Each course may be taken independently for credit. Letter grading.

250A-250B. Seminars: Armenian Literature. (4-4) Seminar, three hours. Selected topics from various periods of Armenian literature. May be repeated for credit. S/U or letter grading.

251. Armenian Literature and Canon Formation. (4) Lecture, four hours. Discussion of fundamental themes and genres around which Armenian literary tradition evolved and modalities by which this has been transformed in course of last two centuries as result of exposure to European thought and expressive forms. Concurrently scheduled with course 251A. S/U or letter grading.

252. Modern Armenian Drama as Vehicle for Social Critique. (4) Lecture, four hours. Readings of selected plays from 1668 to 1992 from three main genres of tragedy, comedy, and serious drama and featuring works by most significant Armenian playwrights, with focus on their role as commentators on contemporary mores and as agents for social reform. Concurrently scheduled with course 252A. Letter grading.

253. Art, Politics, and Nationalism in Modern Armenian Literature. (4) Lecture, four hours. Examination of role of literature in modern Armenian society in service to cause or causes, as propaganda for various ideologies, as art for art's sake, etc. Exploration of contrasting aesthetics implicit in these differing interpretations. Concurrently scheduled with course 253A. P/NP or letter grading.

255. Issues in Armenian American Literature and Culture. (4) Lecture, four hours. Preparation: reading knowledge of modern Eastern and Western Armenian. Theoretically informed exploration of some of most salient questions related to Armenian American
-community as reflected in its literature and other cultural artifacts in interaction with its pluralistic American ambience. Concurrently scheduled with course C155. Letter grading.

C262. Armenian Film and Culture. (5) Lecture, six hours. Requisite: course 1C or 4C. Overview of development of Armenian cinematography from first talkie to present, with focus on work of most seminal directors from Armenian Republic, as well as various voices from worldwide diaspora. Concurrently scheduled with course C156. S/U or letter grading.

596. Directed Individual Study. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U or letter grading.


**Hebrew**

**Lower-Division Courses**

1A-1B-1C. Elementary Hebrew. (5-5-5) Lecture, four hours; laboratory, one hour. Enforced preparation: Hebrew placement test. Course 1A is enforced requisite to 1B, which is an enforced requisite to 1C. Open to native speakers. Introduction to modern Hebrew, including listening, speaking, reading, and writing. P/NP or letter grading.

8. Elementary Hebrew: Intensive. (12) Lecture, 10 hours; discussion, 10 hours. Intensive course equivalent to courses 1A, 1B, and 1C. Introduction to modern Hebrew, including listening, speaking, reading, and writing. Offered in summer only. P/NP or letter grading.

**Upper-Division Courses**

102A-102B-102C. Intermediate Hebrew. (5-5-5) Lecture, five hours. Enforced requisite: course 1C or Hebrew placement test. Course 102A is enforced requisite to 102B, which is enforced requisite to 102C. Not open to native speakers. Amplification of grammar; reading of texts from modern literature. P/NP or letter grading.

103A-103B-103C. Advanced Hebrew. (4-4-4) Lecture, five hours. Enforced requisites: courses 102A, 102B, and 102C, or Hebrew placement test. Students with prior knowledge of Hebrew who did not take courses 102A-102C should contact instructor to determine appropriate enrollment level. Not open to native speakers. Designed for students with intermediate speaking fluency and reading abilities in Hebrew. Introduction to modern Hebrew literary texts. P/NP or letter grading.


110C. Readings in Biblical Hebrew. (4) Lecture, three hours. Requisites: courses 110A, 110B. Continuation of course 110B. Reading of prose texts from Hebrew Bible, particularly from Former Prophets (Joshua-Kings). Introduction to certain aspects of historical grammar of biblical Hebrew. Reading and translation of variety of texts from different historical periods of Hebrew language, including texts from Archaic, Standard, and Late periods. Increased understanding of Hebrew verbal system, including different verbal patterns, their morphology, and syntactic function in biblical Hebrew prose. P/NP or letter grading.

111A. Israeli Society through Hebrew Song and Video. (4) Lecture, three hours; laboratory, one hour. Requisite: course 1C. Use of contemporary Israeli song and video to explore Israeli collective imagination and various Israeli sociocultural issues to familiarize students with different aspects of Israeli daily life and popular culture, while teaching them multiple speaking, listening, reading, and informal contexts and enriching their Hebrew vocabulary and its retention. P/NP or letter grading.

111B-111C. Conversational Hebrew. (3-3) Lecture, two hours; laboratory, one hour. Requisite: course 111A. Course 111B is requisite to 111C. Vocabulary used in daily life, different speech acts in both formal and informal contexts, and various Israeli sociocultural issues using different kinds of media, such as video, Internet, and newspapers. P/NP or letter grading.

112. Readings in Modern Scholarly Hebrew. (2) Seminar, two hours. Requisite: course 102C. In-depth reading and discussion of selected scholarly articles in modern Hebrew for various disciplines: Bible study, Jewish history and folklore, sociology, and literary criticism. Development of student proficiency in vocabulary, terminology, and ideas in these fields while enhancing comprehension of complex syntactical structures in Hebrew. May be repeated for credit. P/NP or letter grading.

M113. Contemporary Israeli Short Stories/Novellas and Films in English. (5) Same as Jewish Studies M113.) Lecture, three hours; laboratory, two hours. Exploration of Israeli short stories/ novellas and films (translated into English) written since mid-1980s that use, each to varying degree, postmodernist techniques to undermine predominance of modernist-Zionist narrator. Recycling and reexamination of Israel condition; skepticism about legitimacy of meta-narratives to redefine blurred out-of-Israel line of identity and subvert its underpinning for mythic. They simultaneously display loss of faith in representation of language, including ability of texts to penetrate to its hidden meaning. Using periphrasis discourses, these texts strive to change modernist aesthetic and power paradigm. P/NP or letter grading.


125. Hebrew and Zoroastrian Commentaries. (4) Lecture, three hours. Requisite: course 103C. Hebrew Bible with the commentaries of Rashi, Ibn Ezra, and/or Nahmanides. May be repeated for maximum of 16 units. Letter grading.

130. Rabbinic Texts. (4) Lecture, three hours. Requisites: courses 103A, 103B, 103C. Readings in Mishnah, Talmud, and/or Midrash. May be repeated for credit.


C140. Modern Hebrew Poetry and Prose. (4) Lecture, three hours. Requisites: courses 103A, 103B, and 103C, or equivalent knowledge of Hebrew. Study of major Hebrew writers of past 100 years. May be repeated for credit. Concurrently scheduled with course C240. Letter grading.

170. Dead Sea Scrolls. (4) Lecture, three hours. Requisite: course 110C. Readings in Hebrew scrolls from Dead Sea, with focus on grammar, paleography, and biblical interpretation in Dead Sea Scrolls. May be repeated for credit. P/NP or letter grading.

180A-180B. Survey of Hebrew Grammar. (4-4) Lecture, three hours. Requisites: courses 102A, 102B, 102C. Descriptive and comparative study of Hebrew grammar, morphology, and syntax. Topics include development of Hebrew language from biblical times to present day, its relation to Arabic and other Semitic languages, methods of language expansion in Israel Hebrew; traditional pronunciation of Hebrew by various Jewish communities, Hebrew contribution to other Jewish languages (Yiddish, Ladino, Judeo-Arabic). P/NP or letter grading.

188FL. Special Studies: Readings in Hebrew. (2) Seminar, two hours. Requisite: course 102C. Students must be concurrently enrolled in an affiliated main course. Primary readings and advanced training in Hebrew. Additional work in Hebrew to enrich and augment work assigned in main course, including reading, writing, and other exercises in Hebrew, P/NP or letter grading.

197. Individual Studies in Hebrew. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research or Senior Project in Hebrew. (2 to 4) Tutorial, one hour. Limited to juniors/ seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

**Graduate Courses**


225. Studies in Dead Sea Scrolls. (2 or 4) Seminar, three hours. Requisite: course 120. Critical study of Dead Sea Scrolls, with attention to history of biblical literature and role of Dead Sea Scrolls in formative Judaism. Reading in original manuscripts from Dead Sea Scrolls. May be repeated for credit. S/U or letter grading.

230. Rabbinic Hebrew Literature. (4) Seminar, three hours. May be repeated for credit. S/U or letter grading.

M231. Texts in Judeo-Arabic. (4) (Same as Arabic M231.) Lecture, three hours. Requisites: course 102C, Arabic 102C. Reading of texts by Mis- monides (medieval religion, medicine, philosophy) and more recent texts in Judeo-Arabic dialects of Iraq and Egypt, with discussion of grammar and deviations from norms of classical Arabic. S/U or letter grading.

235. Hebrew Literature of Second Temple Period. (4) Seminar, three hours. Designed for students who have basic language skills and capacities necessary for reading Biblical Hebrew or Rabbinic Hebrew. Reading, analysis, and interpretation of Hebrew literature composed during Second Temple Period. Rele- vant sources include Chronicles, Ezra-Nehemiah, Ec- clesiastes, Ben Sira, Tosefta, Dead Sea Scrolls, and other documents from Judean desert, and various ap- rocypha and pseudepigrapha. Special attention to historical development of Hebrew language and litera- ture in relation to both earlier biblical sources, styles, grammar, and syntax and to subsequent Rabbinic writings. Course builds following skills: reading un- pointed texts, mastering distinctive elements of vo- cabulary, idiom, and syntax of Second Temple He- brew, and analyzing relationships between biblical and postbiblical sources. May be repeated for credit. S/U or letter grading.

C240. Modern Hebrew Poetry and Prose. (4) Lecture, three hours. Requisites: courses 103A, 103B, and 103C, or equivalent knowledge of Hebrew. Study of major Hebrew writers of past 100 years. May be repeated for credit. Concurrently scheduled with course C140. Letter grading.


596. Directed Individual Study. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U or letter grading.

M115A-M115B-M115C. Elementary Azeri. (4-4-4) (Same as Turkish Languages M115A-M115B-M115C) Lecture, five hours. Knowledge of Russian, Turkish, and Iranian helpful. Grammatical competence at elementary level; knowledge of basic facts of Azeri grammar; reading competence with help of dictionary; ability to write simple compositions; basic conversational skill. P/NP or letter grading.

120. Comparative Study of Six Major Persian Poets. (4) Lecture, four hours. Preparation: knowledge of Persia. Lectures in Persian, readings in English and Persian. Comparative study of six major Persian poets from 10th to 14th century who shaped sense of Persian identity and delineated chief distinguishing characteristics of Persian thought and culture. May be repeated for credit with consent of instructor. P/NP or letter grading.

130. Intellectual History of Jews of Persia. (4) Lecture, three hours. Readings in English. Introduction to intellectual history of Jews in Persia by highlighting select areas of Judeo-Persian studies and focusing on various authors and their work. P/NP or letter grading.

131. Introduction to Judeo-Persian Language and Culture. (4) Lecture, three hours. Preparation: knowledge of Persian equivalent to course 120C. Introduction to history of Judeo-Persian literature and culture to prepare students to read Judeo-Persian texts. P/NP or letter grading.

132. Intermediate Judeo-Persian Literature and Culture. (4) Lecture, three hours. Preparation: courses 103A-B-C. Study of major Persian poets and prose writers: prose—Sohra-vardi, Hamadâni, Nasafi, Íraqi, and others; poetry—Hâfez, Sa’dí, Rúmí, Bahá’í, Dehkhoda, and others. May be repeated for credit with consent of instructor. P/NP or letter grading.

140. Persian Belles Lettres (Adabâyât). (4) Lecture, three hours. Preparation: course 102C. Study of major Persian poets and prose writers: prose—Sohravard'i, Hamadâni, Nasafi, Íraqi, and others; poetry—Hâfez, Sa’dí, Rúmí, Bahá’í, Dehkhoda, and others. May be repeated for credit with consent of instructor. P/NP or letter grading.

141. Persian Analytical Prose. (4) Lecture, three hours. Preparation: course 102C. Study of selected analytical and expository prose texts, with emphasis on philosophy, sciences, literary criticism, and history. May be repeated for credit with consent of instructor. P/NP or letter grading.

142. Persian Popular Ethics. (4) Lecture, three hours. Preparation: course 102C. Study of major Persian works on popular ethics that have helped shape normative social, cultural, and political values in Iranian civilization. May be repeated for credit with consent of instructor. P/NP or letter grading.

150A-150B. Survey of Persian Literature in English. (4-4) Lecture, three hours. Knowledge of Persia required. Each course may be taken independently for credit. P/NP or letter grading.

202A-202B-202C. Accelerated Elementary Persian. (5-5-6) Lecture, four hours; discussion; two hours; laboratory, 30 minutes per day. Preparation: some knowledge of spoken Persian. Concurrently offered. May be repeated for credit with consent of instructor. Each course may be taken independently for credit. P/NP or letter grading.

203A-203B-203C. Advanced Persian. (4-4-4) Lecture, three hours. Preparation: course 202C. Students who do exceptionally well in course 202C may be permitted to enroll in 203A-B-C. May be repeated for credit with consent of instructor. Individual contract required. P/NP or letter grading.


222A-222B-222C. Vedic. (4-4) (Same as Indo-European Studies M222A-M222B and South Asian M222A-M222B) Lecture, three hours. Preparation: knowledge of Sanskrit equivalent to courses 1A, 1B, 1C. May be repeated for credit. S/U or letter grading.


597. Examination Preparation. (2 to 8) Tutorial, one hour. Limited to juniors/seniors. Individual study with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

M210. Topics in Ancient Iranian History. (4) (Same as Religion M210) Seminar, three hours. Varying topics on Elamite, Achaemenid, Arsacid, and Sasanian history. May be repeated for credit. S/U or letter grading.


221. Rumi, Mystic Poet of Islam. (4) Seminar, three hours. Preparation: courses 220A and 220B. Study of life and works of Rumi in context of interaction of Sufism and poetic creativity. May be repeated twice for credit.

222A-222B-222C. Vedic. (4) (Same as Indo-European Studies M222A-M222B and South Asian M222A-M222B) Lecture, three hours. Preparation: knowledge of Sanskrit equivalent to South Asian 110C. Characteristics of Vedic dialect and readings in Rig-Vedic hymns. Only course M222B may be repeated for credit. S/U or letter grading.


231A-231B-231C. Advanced Middle Persian. (4-4-4) Lecture, four hours. Preparation: course 161C. Course 231A is required to 231B, which is required to 231C. Further studies in grammars and texts of Middle Persian languages (e.g., Middle Persian, Parthian, Sogdian, Khotanese, Bactrian). May be repeated for credit with consent of instructor. S/U or letter grading.

250. Seminar: Classical Persian Literature. (4) Seminar, three hours. Preparation: courses 103A, 103B, 103C. 199. May be repeated twice for credit.

256. Directed Individual Study. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U or letter grading.

259. Archaeology of Iran. (4) (Same as Ancient Near East CM259) Lecture, three hours. Designed to introduce students to Iranian archaeology from prehistoric through Achaemenid times. Concurrently scheduled with course CM163. S/U or letter grading.

596. Directed Individual Study. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U or letter grading.


Islamic Studies

Upper-Division Courses

M107. Islam in West. (Formerly numbered Islamics M107.) (Same as Arabic M107 and Religion M107.) Lecture and discussion, one hour. Acquisition of understanding of basic doctrines and practices of Islam. Survey of history of Islam in West, with focus on U.S. and France. Analysis of issues relevant to growth and development of selected Muslim communities in West. Exposure to diverse perspectives of Islam through independent research on Muslim communities and institutions in U.S. Development of strong analytical writing and speaking skills. P/NP or letter grading.

M110. Introduction to Islam. (Formerly numbered Islamics M110.) (Same as Religion M110.) Lecture, three hours; discussion, one hour. Genesis of Islam, its doctrines, and practices, with readings from Qur'an and Hadith; schools of law and theology; piety and Sufism; reform and modernism. P/NP or letter grading.

M111. Introduction to Islamic Archaeology. (Formerly numbered Islamics M111.) (Same as Art History M119C and Middle Eastern Studies M111.) Lecture, three hours. From earliest monuments of Islam in Arabia and Jerusalem to humble remains of small Cairene and Istanbul workshops; focus on archaeological and standing remains in central Islamic lands (primarily Syria, Egypt, and Iraq), Turkey, Iran, North Africa, Spain, and cultural transformations occurred from birth of Islam in 7th century to early Ottoman period in 16th and 17th centuries, which are traceable in material records. Assessment of effectiveness of tools afforded by historical archaeology to aid understanding of past societies. P/NP or letter grading.

M112. Archaeology and Art of Christian and Islamic Egypt. (4) (Same as Archaeology M112, Art History M112, and Middle Eastern Studies M112.) Lecture, three hours. Culture of Egypt transformed gradually after Muslim conquest in mid-7th century C.E. According to material evidence such as ceramics, textiles, architectural forms, and building techniques, it is functionally impossible to separate pre-Islamic Christian Egypt from early Islamic Egypt. Although population may have become largely Muslim by 10th century, Egypt remained Coptic in many senses even to 14th century and retains sizeable Christian minority to present. Survey of archaeological remains and standing architecture of Egypt from 6th to 19th century, culture, and content of material culture and shifts in human geography and land use. P/NP or letter grading.

130. Shi'a in an Islamic History. (4) (Formerly numbered Islamics 130.) Seminar, three hours; discussion, one hour. Rise and development of Shi'a Islam, its doctrines, and practices; major branches: Twelvevers, Ismailis, Zaydis; their contribution to Islamic thought and civilization; modern trends of reinterpretation and reform. Letter grading.

151. Contemporary Islamic Thought. (4) (Formerly numbered Islamics 151.) Lecture, 90 minutes; discussion, 90 minutes. Recommended requisite: course M110. Contemporary writings of major Islamic thinkers in English translation, provides balanced picture of enormous ideological variety found in contemporary Muslim world. Examination of representative works of Muslims from modern Islamic intellectuals and writers. Letter grading.

197. Individual Studies in Islamic Studies. (2 to 4) (Formerly numbered Islamics 197.) Tutorial, one hour. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research or Senior Project in Islamic Studies. (2 to 4) (Formerly numbered Islamics 199.) Tutorial, one hour. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200. Introduction to Islamic Studies. (4) Seminar, three hours. Introduction to various disciplines and methods employed in study of Islamic histories, cultures, and societies, with special emphasis on methodology and current theories and how they may be used and combined by Islamic studies students. Content varies each year. Letter grading.

201. Arabo-Islamic Sciences. (4) (Formerly numbered Islamics 201.) Seminar, three hours. Preparation: good reading knowledge of Arabic, English, and one other Western European language. Comprehensive coverage of Arabo-Islamic sciences that formed matrix of Islamic education. Survey of most recent developments in following disciplines: Arabic language and literature, Qur'anic sciences, traditions, jurisprudence, theology, and Sufism. Letter grading.

291A. Variable Topics in Islamic Studies. (4) Seminar, three hours. Selected topics on Islam. May be repeated for credit with topic change. S/U or letter grading.

596. Directed Individual Study. (2 to 8) (Formerly numbered Islamics 596.) Tutorial, to be arranged. May be repeated for credit. S/U or letter grading.

597. Examination Preparation. (2 to 8) (Formerly numbered Islamics 597.) Tutorial, to be arranged. S/U grading.

598. MA Thesis Research and Preparation. (2 to 8) (Formerly numbered Islamics 598.) Tutorial, to be arranged. S/U grading.

599. PhD Dissertation Research and Preparation. (2 to 8) (Formerly numbered Islamics 599.) Tutorial, to be arranged. S/U grading.

Jewish Studies

Lower-Division Courses

M10. Social, Cultural, and Religious Institutions of Judaism. (5) (Same as Religion M10.) Lecture, three hours; discussion, one hour. Judaism's basic beliefs, institutions, and practices. Topics include development of biblical and rabbinic Judaism; concepts of god, sin, repentance, prayer, and the messiah; history of Talmud and synagogue; evolution of folk beliefs and civilization; modern trends of reinterpretation and reform. Letter grading.

M57. Popular Jewish and Israeli Music. (5) (Same as Music History M57.) Lecture, four hours; discussion, one hour. Music of Jews is diverse. With history of several thousand years and series of developments in modernity, music in Jewish life covers variety of styles found in many contexts. Exploration of music of Jews within last 100 years, with focus on popular music of Jews in America and Israel. Examination of music in Israel, with focus on songs of land of Israel, Israeli rock, and Mizrahi Mizrahi (Middle Eastern popular music). P/NP or letter grading.

M59. Jewish Law. (5) Seminar, three hours. Introduction to Jewish law from biblical literature to modern legal systems. Comparison of Jewish legal systems to modern secular systems and discussion of ethical dimensions of legal systems. P/NP or letter grading.

M140A-140B. American Jewish History. (4-4) Lecture, three hours. Examination of cultural history of American Jewish community from its inception to the present, with emphasis on integration of successive immigrants and development of institutional, political, and cultural identities. P/NP or letter grading.

M146. Modern Israel: Politics, Society, Culture. (4) (Formerly numbered 142.) (Same as Middle Eastern Studies M142.) Lecture, three hours. Examination of evolution of Israel—its changing society, volatile domestic and foreign politics, and dynamic culture—from its foundation in 1948 to present, in context of global political and cultural change and changing Jewish world. Tension between Israel's conception of itself as Jewish state and fact that it is home to wide variety of ethnic and religious groups and to great diversity of cultures; that it was envisioned as safe haven for Jewish people but has been characterized by insecurity and ongoing war; that, founded as democracy, it contends with multiple strains on its democratic Jewishness, such as tensions between Jews and Arabs, secular and religious Jews, and disparate ethnic groups. P/NP or letter grading.

M154. Zionism: Ideology and Practice in Making of Jewish State. (4) (Same as Middle Eastern Studies M144.) Lecture, three hours; discussion, one hour. History of Zionism on backdrop of European, world, and Jewish histories from ideological origins to political, cultural, and social foundations of State of Israel. P/NP or letter grading.

M150A-150B. Hebrew Literature in English. (4-4) Lecture, three hours. Each course may be taken independently for credit. P/NP or letter grading.

M151A. Diaspora Literature. (Same as Comparative Literature M151A.) Lecture, three hours. Each course may be taken independently for credit. P/NP or letter grading.

M151A-151B. Modern Jewish Literature in English. (4-4) Lecture, three hours. Each course may be taken independently for credit. P/NP or letter grading.

Upper-Division Courses

M113. Contemporary Israeli Short Stories/Novellas and Films in English. (5) (Same as Hebrew M113.) Lecture, three hours; laboratory, two hours. Exploration of Israeli short stories/novellas and films (translated into English) written since mid-1980s that use, each to varying degree, postmodernist techniques to undermine predominance of modernist-Zionist reality. Emphasis on analysis of Israeli condition and Zionist condition and skepticism about legitimacy of meta-narratives to redefine blurred out-line of Israeli identity and subvert its underpinning formative myths. Students will analyze display loss of faith in representational dimension of language, including ability of texts to penetrate to its hidden meanings. Using periphery discourses, these texts strive to change premodern aesthetic and power paradoxa. P/NP or letter grading.


M162. Israel Seen through Its Literature. (4) (Same as Comparative Literature M162.) Lecture, three hours. Attempt to impart profound understanding of Israel as seen through its literature. Examination of variety of literary texts—stories, novels, and poems—and reading of them in their historical backdrops. P/NP or letter grading.
Near Eastern Languages and Cultures / 541

M170. Variable Topics. (4) (Same as Religion M178.) Seminar, three hours. Interdisciplinary approach to some major topics in study of religion and Middle Eastern studies. May be repeated for credit with topic change. P/NP or letter grading.

M180A. Cultural Identity and Representation of Identity: Debates and Writing. (5) (Same as Art History M179A and World Arts and Cultures M179A.) Lecture, three hours; discussion, two hours. Course M180A is requisite to M180B, which is requisite to M180C. Designed for transfer students. How and in what tangible and intangible materials of human culture are used by their creators to fashion and refashions their identities over time and in different spaces. Introduction to multidisciplinary perspectives on human cultures and associated objects they create, different issues addressed by students, attention to excavation, preservation, and presentation of these materials. Begins with prehistoric antiquities, way this means to those whose heritage is being studied and/or exhibited through use of many rich cultural resources on and off campus. Examination of topics related to cultural heritage, with strong focus on debate and writing. Writing of weekly short essays or Op-Ed pieces based on what students have learned. Letter grading.

Graduate Courses

200. Bibliography and Method of Near Eastern Languages and Literatures. (4) (Formerly numbered Near Eastern Languages 200.) Lecture, two hours. Required for MA degree. Introduction to bibliographic resources and training in methods of research in various areas of specialization offered by department. May be repeated for credit. S/U or letter grading.

201. Study of Religion: Theory and Method. (4) (Formerly Near Eastern Languages 201.) Seminar, three hours. Preparation: familiarity with at least two major world religions. Designed for advanced undergraduate and graduate students. Introduction to advanced topics in the study of religion, with an emphasis on the development of religious traditions, discussions of theories and concepts relevant to both historical and contemporary contexts, with focus on presuppositions and core concepts and implications of each theory. Letter grading.

210. Survey of Afro-Asiatic Languages. (4) (Formerly numbered Near Eastern Languages 210.) Lecture, three hours. Survey of structures of number of representative languages from various major branches of Afro-Asiatic (AFrA) language family. S/U or letter grading.

C222. History, Memory, and Identity in Israel. (4) (Formerly numbered Near Eastern Languages 222.) Seminar, three hours. Israeli society was born in effort to reshape images of Jewish past and has been shaken by many debates over history, recent and ancient events, and how these are represented by historical scholarship as well as in popular media and public spaces. Struggles over image of past have been central (as in many other societies) to debates about identity in present and directions, goals, and hopes for future. Exploration of ways in which struggles over identity in present and shaping of Israeli collective memory present. Examination of historiographical debates and their reflections in range of media to make some sense of ever-changing past, ways in which it shapes political, ideological, and cultural identities in present, and where meeting points are between popular discourse and work historians do. Examination of conflicting readings of past and its representation in Israeli historiography and in shaping of Israeli collective memory and identity. Concurrently scheduled with course C122. S/U or letter grading.

241. Folklore and Mythology of Near East. (4) (Formerly numbered Near Eastern Languages 241.) Lecture, two hours. Introduction to the study of a variety of traditions in ancient Near Eastern literature concerning creation of cosmos, origins of mankind, and boundaries between divine and human realms. Answers to questions concerning origins of evil, pursuit of wisdom, expectations for life beyond death, and quest for immortality are all sought in folklore of ancient religions. Directed readings of ancient literatures. S/U or letter grading.

290. Seminar: Paleography. (4) (Formerly numbered Near Eastern Languages 290.) Seminar, three hours. Provides students with ability to cope with varieties of manuscripts. S/U or letter grading.

Near Eastern Languages

Lower-Division Course

M20. Visible Language: Study of Writing. (5) (Same as Asian M20, Indo-European Studies M20, Slavic M20, and Southeast Asian M20.) Lecture, three hours; discussion, one hour. Consideration of concrete means of language representation in writing systems. Earliest representations of language known are those of Near East dating to end of 4th millennium B.C. While literate civilizations of Egypt, Indus Valley, China, and Mesoamerica left little evidence of corresponding earliest developments, their antiquity and, in case of China and Mesoamerica, their evident isolation marks these centers as loci of independent developments in writing. Basic characteristics of early scripts, assessment of modern alphabetic writing systems, and presentation of conceptual basis of semantic language representation. Origins and development of early non-Western writing systems. The Greco-Roman alphabet arose in 1st millennium B.C. and how it compares to other modern writing systems. P/NP or letter grading.

Upper-Division Course

CM114. Teaching and Learning of Heritage Languages. (4) (Same as Asian CM124 and Slavic CM114.) Lecture, three hours. Consideration of issues relevant to heritage language learners (HLL) and to heritage language (HL) instruction. Readings and discussion on such topics as definitions of HLLs and HLs; linguistic, demographic, sociolinguistic, and sociocultural profile of HLLs; particularly HL groups most represented among UCLA students; institutional and instructor attitudes toward HLLs; impact of student motivation and expectations on HL curriculum and teaching approaches; similarities and differences between HLLs and foreign language learners (FLLs) regarding teaching methods and materials; diagnostic testing and needs analysis; use of oral/aural proficiency as springboard for literacy instruction; optimization of instruction of mixed HL and FL classes. Action research component included. Concurrently scheduled with course CM214. P/NP or letter grading.

Graduate Courses

CM214. Teaching and Learning of Heritage Languages. (4) (Same as Asian CM224 and Slavic CM214.) Lecture, three hours. Consideration of issues relevant to heritage language learners (HLL) and to heritage language (HL) instruction. Readings and discussion on such topics as definitions of HLLs and HLs; linguistic, demographic, sociolinguistic, and sociocultural profile of HLLs; particularly HL groups most represented among UCLA students; institutional and instructor attitudes toward HLLs; impact of student motivation and expectations on HL curriculum and teaching approaches; similarities and differences between HLLs and foreign language learners (FLLs) regarding teaching methods and materials; diagnostic testing and needs analysis; use of oral/aural proficiency as springboard for literacy instruction; optimization of instruction of mixed HL and FL classes. Action research component included. Concurrently scheduled with course CM114. S/U or letter grading.

CM280. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation for pre-professional phase of employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for instruction at UCLA. May be repeated for credit. S/U or letter grading.

495. Preparation for Teaching Language and Literature in Near Eastern Languages and Cultures. (2) Seminar, two hours. Problems and methods of presenting literary texts as exemplary materials in teaching of language and literature in Near Eastern Languages and Cultures. Good practice, with individual counseling and faculty evaluation of teaching assistant performances. May not be applied toward MA degree requirements. S/U grading.

Semitics

Upper-Division Courses


140A-140B. Elementary Akkadian. (4-4) Lecture, three hours. Elementary grammar and reading of texts in standard Babylonian.

141. Advanced Akkadian. (4) Lecture, three hours. Advanced Akkadian syntax and grammar; reading of Akkadian historical and literary texts. May be repeated for credit. P/NP or letter grading.

142. Akkadian Literary Texts. (4) Lecture, three hours. Selected readings from Akkadian myths and epics, with introduction to historical tradition of works and their literary structure. May be repeated for credit. P/NP or letter grading.

197. Individual Studies in Semitics. (2 to 4) Tutorial, one hour. Limited to juniors/senior. Individual intensive study with scheduling arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research or Senior Project in Semitics. (2 to 4) Tutorial, one hour. Limited to juniors/senior. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses


215B. Syriac, (4) lecture, two hours. Morphology and syntax of Syriac language; readings in Syriac translation of Bible and Syriac literature. May be repeated for credit. S/U or letter grading.


Neurobiology

David Geffen School of Medicine

73-235 Center for Health Sciences
Box 951763
Los Angeles, CA 90095-1763

310-206-3944
neurobio@mednet.ucla.edu
https://www.neurobio.ucla.edu

Paul E. Micevych, PhD, Chair
Felix E. Schweizer, PhD, Vice Chair, Education

Professors

Michele A. Basso, PhD, in Residence
Nicholas C. Brecha, PhD
Dean V. Buonomano, PhD
S. Thomas Carmichael, MD, PhD
Jerome Engel, Jr., MD, PhD (Jonathan Sinyai
Professor of Epilepsy)
Jack L. Fieldman, PhD
Mark A. Frye, PhD
David L. Glanzman, PhD
Ronald M. Harper, PhD
Carolyn R. Houser, PhD

Joanna C. Jen, MD, PhD
Bajjit S. Khak, PhD
Mayank R. Mehta, PhD
Paul E. Micevych, PhD (Edith Agnes Plumb Professor of Neurobiology)
Bennett G. Novitch, PhD (Ethel Scheibl Professor of Neuroscience)
Carlos Portera-Caillau, MD, PhD, in Residence
Dario L. Ringach, PhD
Alapakkam P. Sampath, PhD, in Residence
Felix E. Schweizer, PhD
Alcino J. Silva, PhD (Eleanor I. Leslie Professor of Pioneering Brain Research)
Michael V. Sofroniew, MD, PhD
Catia Sternini, MD, in Residence
Joshua T. Trachtenberg, PhD
David S. Williams, PhD, in Residence

Professors Emeriti

R. Dean Bok, PhD (Dolly Green Professor Emeritus of Ophthalmology)
John H. Campbell, PhD
Marie-Françoise Chesseelet, MD, PhD (Charles H. Markham Professor Emerita of Neurology)
Edwin L. Cooper, PhD
Jean S. de Vellis, PhD (Dr. George Tarjan Professor Emeritus of Mental Retardation)
V. Reggie Edgerton, PhD
Robert G. Frank, Jr., PhD
Roger A. Gorski, PhD
Lawrence Kruger, PhD
John K. Lu, PhD
Ynez V. O’Neill, PhD
Arnold B. Scheidel, MD
John D. Schlag, MD
Jose P. Segundo, PhD
M.B. Sternman, PhD
Anna N. Taylor, PhD
Jaime R. Villablanca, PhD
Charles D. Woody, PhD
Guido A. Zampighi, DDS, PhD

Associate Professors

James W. Basley, PhD
Samantha J. Butler, PhD

Assistant Professors

Jeffrey M. Donlea, PhD
WeiZhe Hong, PhD
Sotiris Masmanidis, PhD

Adjunct Professor

Ronald Szymusiak, PhD

Adjunct Instructor

Jennifer A. Ogren, PhD

Scope and Objectives

The Department of Neurobiology offers advanced training leading to the PhD degree. Graduates can anticipate an academic career at the college or university level or as a basic science researcher at a research institute or biotechnology company. In accord with this the department strives to produce graduates soundly qualified both for teaching at the college or university level and for the conduct of original research in neurobiology. The overall objective of the PhD program is to provide students with a strong theoretical and practical foundation in the area of cellular and systems neurobiology, with the goal to develop a better understanding of normal and pathological brain function and behavior. The graduate program provides students with (1) basic and advanced instruction in the fundamentals of neuroscience, (2) advanced independent research training in the areas of cellular, structural, and systems neurobiology, and (3) teaching experience in undergraduate, graduate, and professional (dental and medical) courses

Turkic Languages

Upper-Division Courses

101A-101B-101C. Elementary Turkish. (5-5-5) Lecture, five hours. Course 101A is requisite to 101B, which is requisite to 101C. Grammar, reading, conversation, and elementary composition drills. P/NP or letter grading.
111A-111B-111C. Elementary Uzbek. (4-4-4) Lecture, three hours; laboratory, two hours. Elementary grammar, reading, and composition exercises; elementary conversation.
112A-112B-112C. Advanced Uzbek. (4-4-4) Lecture, three hours; laboratory, two hours. Descriptive Uzbek grammar, reading, and analysis of Uzbek literary and folkloric texts. High-style composition and conversation.
M115A-M115B-M115C. Elementary Azeri. (4-4-4) (Same as Iranian M115A-M115B-M115C.) Lecture, five hours. Knowledge of Russian, Turkish, and Iranian helpful. Grammatical competence at elementary level; knowledge of basic facts of Azeri grammar; reading competence with help of dictionary; ability to write simple compositions; basic conversational skill. P/NP or letter grading.
116A-116B-116C. Advanced Azeri. (4-4-4) Lecture, three hours; discussion, one hour; laboratory, one hour. Preparation: placement test. Proficiency-based course in descriptive Azeri grammar. Reading and analysis of Azeri literary and folkloric texts in new writing system. High-style composition and conversation. May be repeated for credit. Letter grading.
160. Turkish Tradition. (4) Lecture/discussion. Preparation: entrance examination. Survey of cultural history of the Turks, as seen primarily through their literature, from their early history to the present.
in neuroscience. The program is targeted to
ward highly qualified and self-motivated doc-
toral students who take advantage of a flexible
curriculum characterized by extensive infor-
mal and formal interactions with faculty in small
groups and on an individual tutorial basis. The
curriculum is structured to allow students ex-
tensive opportunities for critical examination of
contemporary neuroscience literature and re-
search and for the development of oral and
written communication skills.

Graduate Study
Official, specific degree requirements are de-
tailed in Program Requirements for UCLA
Graduate Degrees, available at the Graduate
Divisions website. In many cases, more detailed
guidelines may be outlined in announcements,
other publications, and websites of the schools,
departments, and programs.

Graduate Degrees
The Department of Neurobiology offers Master
of Science (MS), Candidate in Philosophy
(CPhil), and Doctor of Philosophy (PhD) de-
grees in Neurobiology.

Medical History
Upper-Division Courses
107A-107B. Historical Development of Medical
Sciences. (4-4) Lecture, three hours. Major contribu-
tions of medicine and medical personalities from ear-
liest times. P/NP or letter grading. 107A. Contribu-
tions of medicine and medical personalities from ear-
liest times through 1650. 107B. Subject in the period
from 1650 through the 19th century. Illustrated lec-
tures, class discussion, and required readings from
selected texts.

M169. History of Neurosciences. (4) Same as Neu-
robiology M169. Lecture. One hour; discussion; two
hours. Development of neurosciences, especially
neuroanatomy and neurophysiology, from Enlighten-
ment era through latter 20th century. Emphasis on
fundamental nerve functions, cell communication,
and technological, conceptual, and cultural influences
that have shaped understanding of brain and nervous
system. P/NP or letter grading.

Graduate Course
M171. Variable Topics Research Seminars: Con-
temporary Biology. (2) Formerly numbered Biologi-
cal Chemistry 191.) Same as Physiological Science
M171.) Seminar, two hours. Limited to undergraduate
fellows in Howard Hughes Undergraduate Research
Program. Presentation of scientific data from primary
research articles and from students' own research.
May be repeated for credit. P/NP grading.

197. Individual Studies in Neurobiology. (2 to 4) Tu-
torial, to be arranged. Limited to juniors/seniors. Indi-
vidualized tutorial study, with scheduled meetings to be
arranged between faculty member and student. As-
signed readings and tangible evidence of mastery of subject
matter required. May be repeated for credit. Individual
contract required. P/NP or letter grading.

199. Directed Research in Neurobiology. (2 to 8) Tu-
itorial, to be arranged. Limited to seniors. Supervised
individual research or investigation under guidance of faculty mentor. Studies in anatomy and
related subject areas appropriate for training of partic-
ular students, which includes reading assignments or
laboratory work leading to final oral or written report.
May be repeated for maximum of 16 units. Individual
contract required. P/NP or letter grading.

Graduate Courses
M200A. Synapses, Cells, and Circuits. (4) Same as
Neuroscience M204.) Lecture, three hours; laboratory,
two hours. Fundamental topics concerning subcel-
lular, cellular, and structural organization of nervous
system. Specific topic areas include neuronal ultra-
structure, cellular neurobiology, neuroanatomy, neural
circuitry, and imaging. Letter grading.

M200B. Cell, Developmental, and Molecular Neu-
robiology. (4) Same as Neuroscience M201.) Lecture,
six hours. Fundamental topics concerning cel-
lular; developmental, and molecular neurobiology, in-
cluding intracellular, signaling, cell-cell communication,
neuronal migration and migration, synapse formation
and elimination, programmed neuronal death, and
neurotropic factors. Letter grading.

M200C. Sensory Systems Neurobiology. (4) Same as
Neuroscience M221.) Lecture, two hours; discus-
sion, two hours. Fundamental topics in sensory sys-
tems neurobiology, including sensory transduction,
taste and olfaction, audition, vision, and somatosens-
sory system. Letter grading.

M200F. Cellular Neurophysiology. (4) Same as
Neuroscience M202 and Physiological Science
M202.) Lecture; three hours; discussion, two hours.
Required: Physiological Science 111A (or M180A or
Physics 6B), 166. Advanced course in cellular phys-
ology of neurons. Action and membrane potentials,
channels and channel blockers, gates, ion pumps and
neuron homeostasis, synaptic receptors, drug-re-
ceptor interactions, transmitter release, modulation
by second messengers, and sensory transduction.
Letter grading.

M200G. Biology of Learning and Memory. (4) Same as
Molecular, Cellular, and Integrative Physi-
ology M200G. Neuroscience M220, and Psychology
M220.) Lecture, four hours. Molecular, cellular, circuit,
systems, neuroanatomy, theory, and models of
learning and memory. Cross-disciplinary focus on
learning and memory to provide integrative view of
subject that emphasizes emerging findings that take
advantage of novel groundbreaking models. Letter grading.

220. Structural Neurobiology. (2) Lecture,
two hours; discussion, two hours; laboratory, two hours.
Introduction to molecular structure of chemical, elec-
trical, and molecular as determined by imaging
methods such as electron tomography. Comprehen-
screen view of current principles governing synaptic
transmission and balanced account of some of most
topically relevant topics such as: transmission, kiss and
run, and fast exocytosis. Laboratory sessions review
methods for preparing samples through in-depth
analysis of imaging strategies. Computer laboratory
sessions allow demonstration of data processing and
interpretation. Three round table discussions provide
forum for further inspiration as well as tackling any
questions or difficulties that may arise from laborato-
ries and lectures. S/U grading.

225. Functional Organization of Visual System. (2) Seminar, three hours. Preparation: basic neurosci-
ence course. Recommended: neuroanatomy, neuro-
physiology, and/or neural systems courses. Designed
for neuroscientists, cell biologists, and psychologists.
Basic organizational, physiological, and functional
principles of visual system and how visual information
is processed at different levels of nervous system.
Structure, microcircuitry organization and function of
retina, central visual nuclei, and primary cortical areas
mediating visual behavior. S/U or letter grading.

M227. Neuroendocrinology of Reproduction. (4)
Same as Physiological Science CM227.) Lecture,
three hours. Enforced requisite: Physiological Science
111B. Understanding of reproductive neuroendocrin-
ology throughout mammalian lifespan, with em-
phasis as appropriate on human condition. Discus-
sion of general concepts of endocrine feedback and
feed-forward loops, sexual differentiation, and struc-
ture and function for components of hypothalamo-pi-
tutary gonadal axis. Exploration of sex differences
in physiology and disease. Letter grading.

M225. Seminar: Neural and Behavioral Endocrinol-
ogy. (2) Same as Physiological Science M225 and
Psychology M294.) Seminar, one hour; discussion,
one hour. Topics include hormonal biochemistry
and pharmacology, hypothalamic/hypophyseal interac-
tions, both hormonal and neural. Structure and func-
tion of hypothalamus. Hormonal control of reproduc-
tive and other behaviors. Sexual differentiation of
brain and behavior. Stress: hormonal, behavioral, and
neural aspects. Aging of reproductive behaviors and
function. Letter grading.

270. Joint Seminar: Neuroscience Lectures. (1)
Seminar, one hour. Final oral exams on current re-
search topics in neuroscience by speakers from na-
tional, international, and local neuroscience commu-
nities. S/U grading.

M287. Dynamics of Neural Microcircuits. (4) Same as
Neuroscience M287.) Lecture, two hours; discus-
sion, two hours. Development of integrative under-
standing of neural microcircuits that undertake specific
functions of sensory processing, generation, and co-
ordination of motor activity, as well as generation
and modulation of neural rhythms. Letter grading.

296. Research Seminar and Journal Club. (1) Sem-
inari, one hour. Seminar and journal club with focus on
current research topics and activities occurring within
department. S/U grading.

298A-298B. Advanced Topics in Neurobiol-
y. (2-2) Seminar, one hour; discussion, one hour. Ad-
vanced seminar course to be offered by different departmental faculty
members. Topics are grouped thematically. S/U grading. 298A.
Molecular, Cellular, and Developmental Neurobiology.
298B. Sensory and Motor Systems Neurobiology.
298C. Regulatory, Behavioral, and Cognitive Neurobi-
ology.

596. Directed Individual Study or Research. (2 to 12) Tutori-
al, to be arranged. S/U grading.

597. Preparation for MS Comprehensive Examina-
tion or PhD Qualifying Examinations. (2 to 12) Tu-
itorial, to be arranged. S/U grading.

598. Thesis Research for MS Candidates. (2 to 12) Tu-
itorial, to be arranged. S/U grading.

599. Dissertation Research for PhD Candidates. (2 to
12) Tutorial, to be arranged. S/U grading.
Neurology
David Geffen School of Medicine
C-153 Reed Neurological Research Center
Box 951769
Los Angeles, CA 90095-1769
310-825-5521
http://www.neurology.ucla.edu

Marie-Françoise Chesselet, MD, PhD (Charles H. Markham Professor Emerita of Neurology), Interim Chair
S. Thomas Carmichael, MD, PhD, Vice Chair of Programs and Research
Barbara Giessler, MD, Executive Vice Chair, Vice Chair of Education and Clinical Affairs
Marc R. Nuwer, MD, PhD, Vice Chair of Finance and Administration
Christopher DeGiorgi, MD, Vice Chair, Olive View-UCLA
Mark J. Morrow, MD, Vice Chair, Harbor-UCLA
Claude G. Wasterlain, MD, Harbor-UCLA
G. Wasterlain, MD, Harbor-UCLA
G. Wasterlain, MD, Harbor-UCLA

Scope and Objectives
Neurology is the medical science dealing with the normal and diseased nervous system. Neurological disorders are often associated with significant disability, morbidity, and mortality. Their higher incidence in association with greater longevity of the population, increased awareness, improved diagnostic methods, and other factors place neurological disorders among the major medical problems today. The Department of Neurology and the Reed Neurological Research Center provide means for a coordinated basic science and clinical research approach to neurological disorders, patient care, and neurological education.

The department instructs medical students throughout the four years. Emphasis in the first year is on basic aspects of neuroanatomy, chemistry, and physiology; in the second year, neurological history taking and neurological examination of afflicted patients are stressed. The third year consists of a clerkship, and the fourth year provides electives in neurology, including an advanced clinical clerkship.

Graduate students and postdoctoral candidates are trained in the basic and clinical laboratories.

For more details on the Department of Neurology and a listing of the courses offered, see the department website.

Neurology
Upper-Division Course
199. Directed Research in Neurology. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Neuroscience
Interdepartmental Undergraduate Program
College of Letters and Science
1506D Gonda Center
Box 951761
Los Angeles, CA 90095-1761
310-206-2349
mlebre@mednet.ucla.edu
http://www.neurosci.ucla.edu

Stephanie A. White, PhD, Chair
Faculty Committee
Scott H. Chandler, PhD (Integrative Biology and Physiology)
David L. Glanzman, PhD (Integrative Biology and Physiology)
Patricia E. Phelps, PhD (Integrative Biology and Physiology)
Kate M. Wassum, PhD (Psychology)
Joseph B. Watson, PhD (Psychiatry and Biobehavioral Sciences)
Stephanie A. White, PhD (Integrative Biology and Physiology)

Scope and Objectives
Neuroscience seeks to understand the brain in health and in disease. Topics of fundamental interest include perception, cognition, learning, memory, motor control, and regulation of body function. The undergraduate interdepartmental program seeks to explore the principles and concepts of this broad range of nervous system function at many levels of analysis, including molecular, cellular, synaptic, network, computational, and behavioral.

Undergraduate Study
The Neuroscience major is a designated capstone major. Undergraduate students have the option of conducting two terms of independent research within a faculty laboratory or completing an advanced laboratory methods course with a series of research modules. Through their capstone work, students demonstrate ability to generate testable scientific hypotheses and develop a research plan to test such hypotheses; work on research projects independently and in small groups; evaluate and discuss primary literature and the validity of hypotheses generated by others; communicate effectively orally and in writing; and demonstrate creative thinking.

Neuroscience BS
Capstone Major
Preparation for the Major
Life Sciences Core Curriculum
Required: Chemistry and Biochemistry 14A, 14B, 14BL, 14C, 14CL, and 14D, or 20A, 20B, 20L, 30A, 30AL, 30B, and 30BL; Life Sciences 7A, 7B, 7C, and 23L; Mathematics 3A, 3B, 3C, and Statistics 10 or 13, or Mathematics 31A, 31B, 32A, and Statistics 10 or 13, or Life Sciences 30A, 30B, and Statistics 13; Physics 1A, 1B, 1C, 4AL, and 4BL, or 5A, 5B, and 5C.

Each core curriculum course must be passed with a grade of C– or better, and all courses must be completed with an overall grade-point average of 2.0 or better. Students receiving grades below C– in two core curriculum courses, either in separate courses or repetitions of the same course, are subject to dismissal from the major.

Transfer Students
Transfer applicants to the Neuroscience major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of general biology with laboratory for majors, preferably equivalent to Life Sciences 1 and 2 OR 7A, 7B, and 7C, one year of calculus, one year of general chemistry with laboratory for majors, one semester of organic chemistry with laboratory, and one statistics course. A second semester of organic chemistry or one year of calculus-based physics is strongly recommended but not required for admission.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major
The Neuroscience major consists of 11 courses (approximately 47 units). Consult respective departmental or program listings for course descriptions.

Required Core: Neuroscience M101A (with grade of C– or better for Neuroscience majors), M101B, M101C, 102, Chemistry and Biochemistry 153A. Psychology 115 cannot be substituted for Neuroscience M101A; however, Psychological Science 111A can be substituted.

Elective Options: One course from each of the following three options:


Molecular, Cell, and Developmental Neuroscience: Molecular, Cell, and Developmental Biology 162, Neuroscience M130, M145, C177, 180, 181, 182, 186, M187, 191C, Physiological Science C126, M145, 146, 147, M181, Psychology M117J, or M166.


Capstone Research Options: (1) Neuroscience 101L or (2) Neuroscience 198A and 198B, or 199A and 199B. Students who select the Neuroscience 101L capstone research option must take four upper-division electives, with at least one from each of the three elective options. Students who select the Neuroscience 198A and 198B, or 199A and 199B option must take three upper-division electives, one from each elective option.

No more than eight courses may be from any one department. A maximum of 8 units of Neu-
Neuroscience / 545

Neuroscience

See the Neuroscience interdepartmental graduate program for graduate course offerings.

Lower-Division Course

10. Brain Made Simple: Neuroscience for 21st Century. (4) Lecture, four hours. Preparation: high school background in either biology or chemistry. Not open for credit to students with credit for course M101A (or Molecular, Cell, and Developmental Biology M175A or Physiological Science M180A or Psychology M117A) or Physiological Science 111A or Psychology 115. General overview and introduction to most exciting and fundamental topics encompassing field of neuroscience. P/NP or letter grading.

Upper-Division Courses

M101A-M101B-M101C. Neuroscience: From Molecules to Mind. (S–5–S) (Same as Molecular, Cell, and Developmental Biology M175A-M175B-M175C, Physiological Science M180A-M180B-M180C, and Psychology M117A-M117B-M117C) Lecture, four hours; discussion, 90 minutes. P/NP or letter grading; M101A. General Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisites: Chemistry 14C or 30A (14C may be taken concurrently), Life Sciences 2, Physics 1B or 1BH or 6B or 6BH. Not open for credit to students with credit for Physiological Science 111A. For Neuroscience and Psychology majors, grade of C– or better is required to proceed to Neuroscience M101B or Physiological Science 111B. Cellular neurophysiology, membrane potential, action potentials, and synaptic transmission. Sensory systems and motor system; how assemblies of neurons process complex information and control motor action. P/NP or letter grading.

M101B. Molecular and Developmental Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisites: course M101A (or Molecular, Cell, and Developmental Biology M175A or Physiological Science M180A or Psychology M117A) or Molecular and Developmental Neuroscience majors must have grade of C– or better) or Physiological Science 111A or Psychology 115, Life Sciences 3, 4 (I may be taken concurrently). Molecular biology of channels and receptors: focus on voltage-dependent channels and neurotransmitter receptors. Molecular biology of supramolecular mechanisms: synaptic transmission, axonal transport, cytoskeleton, and muscles. Classical experiments and modern molecular approaches in developmental neurobiology. P/NP or letter grading.

M101C. Behavioral and Cognitive Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisites: course M101A (or Molecular, Cell, and Developmental Biology M175A or Physiological Science M180A or Psychology M117A; Neuroscience majors must have grade of C– or better) or Physiological Science 111A or Psychology 115. Neural mechanisms underlying motivation, learning, and cognition. P/NP or letter grading.

101L. Neuroscience Laboratory. (4) Lecture, three hours; laboratory, one hour. Enforced requisite: course M101A. Not open for credit to students with credit for Psychology 116. Introduction to laboratory methods in neuroscience. Studies range from molecular and cellular biological to behavioral. Hands-on experience with important methodology and experimental approaches in neuroscience. Letter grading.


M119L. Human Neuropsychology. (4) (Same as Psychology M119L) Lecture, three hours. Recommended requisite: courses M101A and M101C (or Psychology 115), Psychology 120A or 120B. Designed for juniors/seniors. Survey of experimental and clinical human neuropsychology; neural basis of higher cognitive functions. P/NP or letter grading.

M119N. Visual System. (4) (Same as Psychology M119N) Lecture, three hours. Requisite: course M101A or Psychological Science 111A or Psychology 115. Ability to image and analyze visual world is truly remarkable feat. Coverage of anatomy and physiology of visual systems to vision to visual cortex. P/NP or letter grading.

M130. Biological Bases of Psychiatric Disorders. (4) (Same as Molecular, Cell, and Developmental Biology M181, Physiological Science M181, Psychiatry M181, and Psychology M117J) Lecture, three hours. Requisite: course M101A (or Molecular, Cell, and Developmental Biology M175A or Physiological Science M180A or Psychology M117A) or Physiological Science 111A or Psychology 115. Underlying brain systems involved in psychiatric symptoms and neurological disorders, including schizophrenia, depression, bipolar disorder, obsessive/compulsive disorder. Provides basic understanding of brain dysfunctions that contribute to disorders and rationales for pharmacological treatments. P/NP or letter grading.

M145. Neural Mechanisms Controlling Movement. (5) (Same as Physiological Science M145) Lecture, four hours. Requisites: course M101A or Physiological Science 111A or M180A. Examination of central nervous system organization required for production of complex movements such as locomotion, mastication, and swallowing. Letter grading.

M161. Personal Brain Management. (4) (Same as Psychological Science M161) Lecture, four hours. Basic overview of brain function and consideration of some management methods that exist already, and what future may hold. New methods for predicting our own futures and modeling brain that might alter risks and benefits of different courses of action, based on individual genetic background and other elements of personal history and environmental exposure. Introduction to the science of behavior change, illustrating how important health-related behavioral habits are and how difficult these can be to change and why. Coverage of series of topics that center on personal enhancement of well-being through consideration of stress management, long-term goal and value identification, mapping of long-term goals onto immediate actions, reinforcement learning, motivation, neuroplasticity, and time management. Critical appraisal of tools to help students distinguish scientifically validated procedures. Offered in summer only. Letter grading.

C172. Neuroimaging and Brain Mapping. (4) Lecture, three hours. Requisite: course M101A (or Molecular, Cell, and Developmental Biology M175A or Physiological Science M180A or Psychology M117A) or Physiological Science 111A or Psychology 115. Study recent research approaches in diagnostic and research imaging. Focus on brain scanning methods, methods, applications, assumptions, and limitations of neuroimaging. Techniques, biological questions, and results. Brain structure, brain function, and their relationships discussed. New methods for predicting our own futures. Letter grading.

C177. Drugs of Abuse from Neurobiology to Policy and Education. (4) Lecture, four hours. Enforced requisite: course M101A. Course ranges from synapse to society. Provides intensive didactic on current neuroscientific basis for understanding substance abuse and blends material with relevant topics such as epidemiology, co-occurring disorders, treatment options, prevention, and public policies, with emphasis on communication of course materials to general public. Concurrently scheduled with course C277. Letter grading.

178. Human Electroencephalography and Evoked Potentials in Research and Clinical Diagnosis. (4) Seminar, four hours. Enforced requisite: course M101A. Not open for credit to students with credit for course 191A. Seminar 1. Emphasis on human electroencephalogram (EEG) and various forms of sensory-evoked potentials. Introduction to number of experimental paradigms that center on experimental brain signals from brainstem to cortex. Letter grading.

180. Genetic, Molecular, and Genomic Approaches to Neural Development and Disease. (4) Seminar, three hours. Enforced requisites: courses M101A, M101B. Not open for credit to students with credit for course 191C, seminar 1. In-depth study of genetic, molecular, and genomic approaches to studying nervous system development and disease. Overview of current technologies used to generate mouse models for genetic and phenotypic analysis. Review of techniques for studying development and disease. Integrative genomic approaches for identifying and characterizing genes involved in these processes. Emphasis on mouse models, but other model organisms considered. Letter grading.

181. Cellular and Molecular Mechanisms of Learning and Memory. (4) Seminar, four hours. Enforced requisite: course M101A. Not open for credit to students with credit for course 191C, seminar 2. Cellular models of learning and memory. Genetic and molecular approaches to learning and memory. Learning and memory deficits in neuropsychiatric diseases. Letter grading.


186. Neural Cell Cultures: Biology, Diseases, and Therapies. (4) Lecture, two and one half hours. Preparation: background in biology and biochemistry. Enforced requisites: courses M101A, M101B. Designed for third- and fourth-year Neuroscience majors. Comprised of four series of 12 seminars designed to familiarize students with the basic scientific principles underlying experimental models of learning and memory. Genetic and molecular techniques for studying development and disease. Overview of molecular, and genomic approaches to studying neural circuits to behavior. Discussion of societal implications of research findings, including their relevance to public policies and criminal justice systems. Letter grading.

191A-191B-191C. Variable Topics Research Seminar. (1) Seminar, one hour. Requisite: course M101A. Limited to senior Neuroscience majors. Preparation for undergraduate assistants. Students assist faculty members and graduate teaching assistants in laboratory only. May not be applied toward elective requirements and may not be repeated for credit. P/NP or letter grading.

192B. Project Brainstorm: Neuroscience K-12 Outreach. (4) Seminar, one hour; fieldwork, three hours. Limited to juniors/seniors. Course to be supervised by faculty and teaching assistant advisers. Project Brainstorm is K-12 science education outreach program of Brain Research Institute (BRI) and Neuroscience PhD and undergraduate programs that stimulates interest in science for children and young adults in grades K-12 by providing hands-on learning experiences that emphasize function and importance of brain. Students expected to develop appropriate lesson plans to be used in Project Brainstorm classroom visits. Students meet on regular basis with supervisors and provide periodic reports of their experience. May not be applied toward major requirements. May be repeated twice for credit. P/NP grading.

192C. Drug Abuse and Society: Conveying Concepts to High School Students. (4) Seminar, four hours (seven weeks); fieldwork, four hours (three weeks). Enforced requisites: courses M101A, C177. Limited to senior Neuroscience majors. Preparation of students to give accurate, knowledgeable, and age-appropriate lectures in area of drug abuse to students at local high schools. Designed as followup to course C177 where students learned didactic material on mechanisms of action and transnational aspects of drugs of abuse. Students meet on regular basis with supervisors and provide periodic reports of their experience. May not be applied toward major requirements. May be repeated twice for credit. Letter grading.


198A. Honors Research in Neuroscience. (4) Tutorial, 12 hours minimum. Requisites: courses 98, M101A, C177. Enforced requisites: courses M101A, C177. Limited to neuroscience honors program students. Directed independent research involving extensive reading and development of honors thesis or comprehensive project under direct supervision of faculty member. For departmental honors, students must also take course 191H. Maximum of 8 units of courses 198A, 198B, 199 may be applied toward major. Individual contract required. In Progress grading (credit to be given only on completion of course 198B).

198B. Honors Research in Neuroscience. (4) Tutorial, 12 hours minimum in laboratory. Requisite: course 198A. Directed individual research involving project that culminate in honors thesis under direct supervision of faculty member. For departmental honors, students must also take course 191H. Maximum of 8 units of courses 198A, 198B, 199 may be applied toward major. Individual contract required. In Progress grading (credit to be given only on completion of course 198B).

199A. Directed Research in Neuroscience. (4) Tutorial, 12 hours minimum. Enforced requisites: courses 99A, B, C, D, and senior Neuroscience major. Limited to junior/senior Neuroscience majors and minors with grades of B (3.0) or better. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project. Limited to 8 units of courses 199A, 199B, 199A, 199B may be applied toward major. Individual contract required. Letter grading.

199B. Directed Research in Neuroscience. (4) Tutorial, 12 hours minimum. Enforced requisite: course 199A. Limited to junior/senior Neuroscience majors and minors with grades of B (3.0) or better. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. Limited to 8 units of courses 199A, 199B, 199A, 199B may be applied toward major. Individual contract required. Letter grading.
Graduate Degree

The Neuroscience Program offers the Doctor of Philosophy (PhD) degree in Neuroscience.

Neuroscience

Graduate Courses

M201. Cell, Developmental, and Molecular Neurobiology. (Same as Neurobiology M200B.) Lecture, six hours. Fundamental topics concerning cellular, developmental, and molecular neurobiology, including intracellular signaling, cell-cell communication, neurogenesis and migration, synapse formation and elimination, programmed neuronal death, and neurotrophic factors. Letter grading.

M202. Cellular Neurophysiology. (4) (Same as Neu- robiology M200F and Physiological Science M202.) Lecture, three hours; discussion, two hours. Requisite: Physiology M210 (or M180A or Physics 6B), 166. Advanced course in cellular physiology of neurons. Action and membrane potentials, channels and channel blockers, gates, ion pumps and neuronal homeostasis, synaptic receptors, drug-receptor interactions, transmitter release, modulation by second messengers, and sensory transduction. Letter grading.

M203. Neural Systems and Anatomy. (6) (Same as Bioengineering M263.) Lecture, four hours; discussion/laboratory, two hours. Prior to first laboratory meeting, students must complete Bloodborne Pathogens training course through UCLA Environment, Health and Safety. Fundamentals of systems neuroscience, with emphasis on integration of cellular, circuit, anatomical, and behavioral analyses aimed at understanding sensorimotor processing, learning, and cognition. Anatomy laboratory includes brain dissections. Letter grading.

M204. Synapses, Cells, and Circuits. (4) (Same as Neurobiology M200A.) Lecture, three hours; laboratory, two hours. Fundamental topics concerning subcellular, cellular, and structural organization of nervous system. Specific topic areas include neural ultrastructure, cellular neurobiology, neuroanatomy, neural circuitry, and imaging. Letter grade (A or P/F).

205. Systems Neuroscience. (4) Lecture/discussion, four hours. Introduction to fundamentals of systems neuroscience, with emphasis on integration of molecular mechanisms, cellular processes, anatomical organization, and behavioral analysis to understand function of neural systems. Letter grading.

M206. Neuroengineering. (4) (Same as Bioengineering M260 and Electrical Engineering M255.) Lecture, four hours; laboratory, three hours; outside study, five hours. Requisites: Mathematics 32A, Physics 1B or 6B. Introduction to principles and technologies of biologic and neural recording, processing, and stimulation. Topics include biologic activity, electrophysiology (action potentials, local field potentials, EEG, EOG), in vivo and ex vivo recording, microelectrode technology, neural signal processing (neural signal frequency bands, filtering, spike detection, spike sorting, stimulus artifact removal), brain-computer interfaces, deep-brain stimulation, and prosthetics. Letter grading.

207. Integrity of Scientific Investigation: Education, Research, and Career Implications. (2) Discussion, two hours. Designed for graduate students. Debate on topics related to ethical conduct of scientific investigation, with emphasis on critical thinking. Topics include scientific misconduct, mentoring, data ownership, authorship, peer review, use of animals and humans in biomedical research, conflicts of interest, technology, and scientific integrity. S/U grading.


215. Variable Topics Research Literature Seminars: Neuroscience. (1) Seminar, two hours. Critical discussion and analysis of current literature for various neuroscience topics. May be taken twice for credit and applied toward neuroscience graduate requirements. S/U grading.

M220. Biology of Learning and Memory. (4) (Same as Molecular, Cellular, and Integrative Physiology M205D, Neurobiology M205C, and Psychology M205.) Lecture, four hours. Molecular, cellular, circuit, systems, neuroanatomy, theory, and models of learning and memory. Cross-disciplinary focus on learning and memory to provide integrated view of subject that emphasizes emerging findings that take advantage of novel groundbreaking models. Letter grading.

M221. Sensory Systems Neurobiology. (4) (Same as Neurobiology M200C.) Lecture, two hours; discussion, two hours. Fundamental topics in sensory systems neurobiology, including sensory transduction, taste and olfaction, audition, vision, and somatosensory system. Letter grading.

M230. Molecular and Cellular Mechanisms of Neu- ronal Integration. (5) (Same as Physiological Science M210 and Physiology M210.) Lecture, four hours; discussion, two hours. Fundamental topics in molecular and cellular neurobiology, including synaptic plasticity, determination of levels of phenotype expression across systems, and provides perspective on its relevance to human memory, cortical conditioning, hippocampus and declarative memory, and frontal lobes and primary memory.

255. Functional Organization of Behavior. (2) Lecture, one hour; laboratory, one hour. Preparation: basic biology and chemistry. Designed to provide introduction to the study of behavior, with emphasis on techniques used for identification, measurement, and visualization of compound thought to be important as media tors of intercellular communication in central nervous system. S/U or letter grading.

M275. Graduate Research in Neuroscience. (2) Discussion, two hours. Preparation: consent of instructor. Course may be taken twice for credit and applied toward neuroscience graduate requirements. Letter grading.

Nursing
School of Nursing
2-147 Factor Building
Box 951702
Los Angeles, CA 90095-1702
310-825-7181
sonsaff@sonnet.ucla.edu
http://www.nursing.ucla.edu

Linda P. Sarna, RN, PhD, FAAN, Dean
Lynn V. Doering, RN, PhD, FAAN, Associate Dean, Academic and Student Affairs

Professors
Dong Sung An, MD, PhD
Barbara M. Bates-Jensen, RN, PhD
Lynn V. Doering, RN, PhD, FAAN
Karen H. Gyllis, RN, PhD
Felicia S. Hodge, DrPH
Mary A. Lewis, RN, DrPH, FAAN
Courtney H. Lynder, MD, ScD(H), FAAN
Janet C. Mentes, PhD, APRN, FAAN, FGSA
Jack Needleman, PhD, FAAN
Wendie A. Robbins, RN, PhD, NP, FAAN, FAANHON (Audrienne H. Moseley Professor of Biological Nursing Science)
Linda P. Sarna, RN, PhD, FAAN (Lulu Wolf Hasseplugg Professor of Nursing)
Dorothy J. Wiley, RN, PhD, FAAN
Mary A. Woo, RN, PhD, FAAN

Professors Emeriti
Nancy L. R. Anderson, RN, PhD, NP-C, AOCN, FAAN
Lina K. Badr, RN, DNSc, PNP-C, FAAN
Betty L. Chang, RN, DNSc, FNP-C, FAAN
Peggy A. Compton, RN, PhD, FAAN
Jacquelyn H. Flaskerud, RN, PhD, FAAN
Deborah Konikai-Griffen, RNC, EdD, FAAN (Audrienne H. Moseley Professor Emerita of Women’s Health Research)
Sally L. Maliski, RN, PhD
Donna K. McNeese-Smith, RN, EdD, CNA
Joyce A. Newman Giger, RN, EdD, FAAN
Linda R. Phillips, RN, PhD, FGSA, FAAN (Audrienne H. Moseley Professor Emerita of Nursing)
Sharren J. Reeder, RN, PhD, FAAN
Gwen M. Van Servellen, RN, PhD, FAAN
Frances M. Wiley, RN, MN
Ann B. Williams, RN, EdD, FAAN

Associate Professors
Sarah E. Choi, RN, PhD, FNP
Jo-Ann O. Eastwood, RN, PhD, CNS, ACNP-BC, FAHA, FAAN
Mary Sue V. Heilemann, RN, PhD
Eufemia Jacob, RN, PhD
Eunice EunKyung Lee, RN, MS, DNSc, GNP, CS
Paul M. Macey, PhD, in Residence
Carol L. Pavlish, RN, PhD, ONC, FAAN
Huibrie C. Pieters, RN, MSN, DPhil, PhD
Nancy A. Pike, RN, PhD, FNP-C, CPNP-AC
Sophie Sokolow, PhD, MPHarm

Assistant Professors
Nalo M. Hamilton, PhD, MSN, APRN-BC
Su Yon Jung, PhD
Elizabeth Anne Thomas, RN, PhD, ANP-BC, COHN-S, FAANHON

Lecturers
Jeffrey A. Adams, RN, MSN
Jody L. Adams-Remeria, RN, MN, FNP
Stephanie C. Au, RN, MSN, FNP-C
Theresa A. Brown, RN, MSN, NP
Nancy Jo Bush, RN, MN, MA, AOCN, ONP, FAAN
Mary M. Canobbio, RN, MN, FAAN
Carol Lynn W. Cunningham, RN, PHN, MSN, FNP-C
Barbara L. Demman, RN, MSN, CNS, ACNP
Elizabeth L. Dixon, RN, MSN, MPP, PhD
Stacey D. Green, RN, MSN, NP-C
M. Jill Jordan, RNC, MSN
Helen L. Kiger, RN, MSN, CNS
Maria P. Knoll, RN, MSN

Erin A. Kopp, RN, MSN, ACNP-C
Amy S. Lohmann, RN, MSN, NP, CNS
Laurie A. Love-Bibbero, RN, MSN, FNP
Young Kee Markham, RN, MN, GNP-C
Nancy E. McGrath, RN, MN, CNP
Silvia L. Miere, RN, MSN, CCRN, CNL
Beck L. Reyes, RN, MSN, PNP, CNS
Deborah A. Rice, RN, MN, FNP-C
Poy Sakijnapapong, RN, MSN, PNP, CNS
Beleta S. Sazu, RN, MSN, CLEC
Elaine L. Strizzi, RN, ACNP-BC
Inese L. Verzemnieks, RN, PhD, PHN

Adjunct Professors
Mary Lynn Breth, PhD
Mary P. Cadogan, DrPH, FNP-BC, FAAN, FGSA
Catherine L. Carpenter, PhD
Anna F. Gawiński, RN, PhD, ACNP-BC, CNS-BC, FAAN
Mark S. Litwin, MD, MPH
Adeline M. Nyamathi, ANP, PhD, FAAN
Sammy Saab, MD, MPH, AGAF
Atilla B. Unler, MD
Marilyn S. Woo, MD

Adjunct Associate Professors
Anita R. Babcock, RN, PhD, CNM
Colleen K. Keenan, RNC, PhD, WHCN
Isabella B. Purdy, RN, PhD
Maria E. Ruiz, RN, PhD
Mary Ann Shinnick, RN, PhD, ACNP-BC, CCNS

Adjunct Assistant Professors
Nancy T. Blake, RN, MN, PhD
Merry M. Buckman, RN, PhD
Teresita E. Cervera-Tindel, RN, PhD
Emma Lyn M. Cuenca, RN, DNP, CCRN, CSC, CNS
John Lazar, RN, PhD, FNP-BC
Mary M. Marfisee, MD
Mary B. Nelson, RN, CPNP, PhD
Benissa E. Salem, RN, MSN, PhD, CNS, PNP, PHN
Rita L. Secola, RN, PhD

Scope and Objectives
A strong scientific basis underlies the teaching of nursing practice, leadership, and research. Related clinical experiences are arranged within theReagan UCLA Medical Center, its affiliates, other major medical centers, or in selected community sites. At the bachelor’s level, nurses are prepared as generalists with special skills in primary, secondary, and tertiary prevention and care within a population-based context, leadership, and evidence-based practice. At the master’s level, nurses are prepared as generalists in hospital-based care or for advanced nursing practice as nurse practitioners, clinical specialists, or administrators in a variety of settings and specialized areas of healthcare. The PhD program prepares scholars who do original research, generate new theories, and build the scientific basis for professional nursing practice. Research is both basic and applied.

Undergraduate Study
The Nursing (Prelicensure) major is a designated capstone major. Students complete a clinically based scholarly project that is approved by a designated faculty member. In completing the capstone course, students should select, evaluate, and apply appropriate theory and research findings concerning individual- and population-based health promotion and disease prevention, biobehavioral and health systems, and social environmental, cultural, and human diversity to the nursing process. They should utilize the nursing process}

NEUROSURGERY
David Geffen School of Medicine
562 Wasserman Building
Box 956901
Los Angeles, CA 90095-6901
310-267-9449
http://neurosurgery.ucla.edu

Linda A. Liau, MD, PhD, MBA, Interim Chair

Scope and Objectives
Neurosurgery is a discipline of medicine that provides (1) operative and nonoperative management (i.e., critical care, prevention, diagnosis, evaluation, treatment, and rehabilitation) of disorders of the central, peripheral, and autonomic nervous systems, including their supporting structures and vascular supply, (2) the evaluation and treatment of pathological processes that modify the function or activity of the nervous system, including the hypophysis, and (3) the operative and nonoperative management of pain.

As such, neurosurgery encompasses treatment of adult and pediatric patients with disorders of the nervous system—disorders of the brain, meninges, and skull and their blood supply, including the extracranial carotid and vertebro arteries, disorders of the pituitary gland, disorders of the spinal cord, meninges, and vertebral column, including those that may require treatment by spinal fusion or instrumentation, and disorders of the cranial and spinal nerves throughout their distribution.

For more details on the Department of Neurosurgery, see the department website.

Neurosurgery
Upper-Division Research in Neurosurgery. (2 to 8)
Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.
to promote biopsychosocial health and disease prevention and to support the resources of culturally diverse clients and families in community- and/or hospital-based settings. Through their work, students should demonstrate effective communication and collaboration skills with clients and their families, research participants, other health professionals, colleagues, and policymakers. They also should identify practice-based problems and hypotheses and critique research on issues of importance to nursing and healthcare delivery; participate effectively in relevant professional and community organizations and/or interest groups; demonstrate leadership as a member of the health team to plan, manage, and evaluate care of individuals, families, and communities for culturally diverse populations; and practice their work based on the principles of ethics, social justice, and law.

Nursing BS Prelicensure Capstone Major

The focus of the prelicensure program is on the preparation of nurse generalists with special skills in primary, secondary, and tertiary prevention and care within an individual- and population-based context while developing the basics for a strong leadership role. Students learn the art and science of nursing using the latest research findings to guide their practice.

Admission

The School of Nursing strives to attract a culturally and ethnically diverse student population. Admission is designed for freshman students and transfer students at the junior level. Freshman applicants are expected to fulfill the University of California admission requirements. Transfer applicants are expected to fulfill the Intersegmental General Education Transfer Curriculum (IGETC). Students must have a grade of C or better in each requisite course and an overall grade-point average of 3.5 or better.

Two recommendation forms and a written statement of purpose are also required. Different life experiences, including previous employment, volunteer work, and community service that reflect leadership, responsibility, multicultural involvement, multilingual abilities, and other unusual skills and knowledge are evaluated for all applicants. Consideration is also given to students who are socially, economically, and educationally disadvantaged. Completed applications should reflect clearly identified career goals and documentation of potential for nursing practice.

Preparation for the Major

Required: Chemistry and Biochemistry 14A, 14B, 14C, Communication 1 or 10, Life Sciences 2, 3, Mathematics 3A or 31A, Microbiology, Immunology, and Molecular Genetics 10, Nursing 3, 10, 13, 20, 50, 5A, 54B, Psychology 10.

Transfer Students

Transfer applicants to the Nursing major with 90 or more units must complete the following introductory courses prior to admission to UCLA: calculus, communications, human anatomy, human physiology, inorganic and organic chemistry, cells, tissues, and organs, microbiology, molecular biology, and introductory or general psychology.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Biostatistics 100A, Nursing 115, 150A, 150B, 152W, 160, 161, 162A through 162D, 164, 165, 168, 171, 173, 174, and completion of a capstone senior scholarly project (course 169). Transfer students must complete Nursing 10, 20, 50, 54A, and 54B on entry. Students may request to pursue a minor in a related field if the coursework can be completed within the 216-unit limit.

The curriculum at UCLA must be completed with a minimum overall grade-point average of 2.0 (C) or better in all courses taken while a student in the School of Nursing. Each required nursing course in the school must be completed with a grade of C or better (C– grade is not acceptable).

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The School of Nursing offers the Master of Science in Nursing (MSN) degree and the Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Nursing. A concurrent degree program (Nursing MSN/Management MBA) is also offered.

Nursing Lower-Division Courses

3. Human Physiology for Healthcare Providers. (5)

Lecture, three hours; laboratory, two hours. Basic understanding of human physiological processes, with emphasis on applications to patient evaluation and care. Concepts underlying normal function and how alterations in these normal functions can affect body systems. Knowledge and understanding of these normal human processes is basic to providing quality nursing care. Examination of system variations across lifespan. Letter grading.

10. Introduction to Nursing and Social Justice I. (2)

Lecture, two hours. Within context of history of nursing, introduction to practice of nursing, including role of advocacy. Discussion of effective use of self as professional nurse in relation to ethics, cultural competence, and human diversity. Introduction to ethical principles (justice, autonomy, veracity, beneficence, confidentiality) and professional values (altruism, autonomy, human dignity, integrity, and social justice) in relation to nursing practice throughout history in health/illness and end-of-life contexts. Letter grading.

13. Introduction to Human Anatomy. (5)

Lecture, three hours; laboratory, two hours. Structural presentation of human body, including musculoskeletal, nervous, circulatory, respiratory, digestive, renal, and reproductive systems. Laboratory uses virtual cadaver dissection and examination. Letter grading.

20. Introduction to Nursing and Social Justice II. (2)

Lecture, two hours. Advanced discussion on history of nursing, with focus on role of contemporary nursing in relation to ethics and social justice. Analysis of ethical principles (justice, autonomy, veracity, beneficence, confidentiality, and professional values (altruism, autonomy, human dignity, integrity, and social justice) in relation to nursing practice throughout history in health/illness and end-of-life contexts. Evaluation of social, cultural, legal, and political forces in relation to paternalism for professional nurses working with diverse patient populations in the 21st century. Letter grading.

50. Fundamentals of Epidemiology. (4)

Lecture, three hours; laboratory, three hours. Epidemiology focuses on distribution and determinants of health-related states or events in specified populations. Fundamentally, epidemiology seeks to control health problems in communities and institutions. Letter grading.

54A. Pathophysiology I. (3)

Lecture, three hours. Preparation: human physiology course taken within past five years. Designed to provide students with basic understanding of pathophysiological changes that occur within internal environment of individuals. Understanding these alterations is basic to providing quality nursing care. Discussion of system variations across lifespan. Letter grading.

54B. Pathophysiology II. (2)

Lecture, two hours. Requisite: course 54A. Designed to provide students with understanding of pathophysiological changes that occur within internal environment of individuals. Presence of dysfunction or disease of selected systems provided as rationale for nursing diagnosis and therapeutic interventions. Letter grading.

Upper-Division Courses

105. Human Physiology. (4)

Lecture, three hours; discussion, one hour. Designed for nursing students. Lecture and discussion, with emphasis on a correlating approach to anatomy and physiology of human body; P/NP or letter grading.

115. Pharmacology and Therapeutics. (5)

Lecture, four hours. Requisites: courses 54A, 54B. Clinical pharmacology for undergraduate nursing students, beginning with emphasis on basic pharmacologic principles. Focus on major drug classes and their mechanism of action, pharmacokinetics, adverse effects, and clinical issues. Letter grading.

150A. Theoretical Foundations of Nursing BS Role and Fundamentals of Professional Nursing Lecture/Clinical Skills Practicum. (4)

Lecture, three hours; laboratory, three hours. Introduction to practice of professional nursing as theory-based goal-directed method for assisting patients to meet basic human needs at various levels of health continua. Concepts of communication, interdisciplinary communication and collaboration, interpersonal relationships, cultural competence, and nursing process as clinical decision-making strategies essential to practice of professional nursing. Characteristics and roles of professional nursing. Development of caregiver, teacher, and collaborator roles in learning experiences in nursing skills laboratory and clinical settings. Letter grading.

150B. Theoretical Foundations of Nursing BS Role and Fundamentals of Professional Nursing Lecture/Clinical Skills Laboratory. (4)

Lecture, three hours; laboratory, three hours. Requisite: course 150A. Continuation of course 150A. Expansion of student knowledge on practice of professional nursing as theory-based goal-directed method for assisting patients to meet basic human needs at various levels of health continua. Concepts of communication, interdisciplinary communication and collaboration, inter-personal relationships, cultural competence, and nursing process as clinical decision-making strategies essential to practice of professional nursing. Characteristics and roles of professional nursing. Development of caregiver, teacher, and collaborator roles in learning experiences in nursing skills laboratory and clinical settings. Letter grading.
550 / Nursing

152W. Human Development/Health Promotion in Culturally Diverse Populations. (5) Lecture, four hours; discussion, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Limited to nursing students. Introduction to principles and theories as they relate to health and wellness across lifespan, using population-based approach to nursing care of diverse populations. Priorities in nutrition and reproductive health, including issues related to contraception and parent- ing; well-child care, school-age health, and chronic illness prevention strategies for young- and middle-aged adults; elderly who live independently and community systems, and providing care to individuals and their families using nursing process, applying nursing role in prevention of chronic or acutely deteriorating illness. Expanding on screening and early detection of illness to prevent illness during clinical experiences. Letter grading.

C155. Global Health Elective: Globalization, Social Justice, and Human Rights. (3) Seminar, two hours. Exploration of theories, issues, debates, and peda- gogy associated with globalization, social justice, and human rights and how these perspectives influence human health and well-being. Provides students with unique opportunity to explore these topics within classroom, via Internet and other technologies, and in other classroom and community settings. Students through collaborative projects with peers around world, reflect on how globalization shapes and transforms local communities and national cultures. Concurrently offered in 410. Letter grading.


162D. Human Responses to Critical Illness: Intro- duction to Critical Care. (4) (Formerly numbered 170.) Lecture; three hours; fieldwork; three hours. En- forcement of nursing role in response to multi- physiological and psychosocial concepts in acute critical illness. Priorities in nutrition and reproductive health, including issues related to contraception and parent- ing; well-child care, school-age health, and chronic illness prevention strategies for young- and middle-aged adults; elderly who live independently and community systems, and providing care to individuals and their families using nursing process, applying nursing role in prevention of chronic or acutely deteriorating illness. Expanding on screening and early detection of illness to prevent illness during clinical experiences. Letter grading.

164. Maternity Nursing. (5) Lecture, three hours; clinical, six hours. Requisites: courses 161, 162D, 163, 164, 165 (or 461), 462, 464, 465D. Theoretical content focuses on population-based approach to public health nursing in relation to health promotion and disease prevention at level of communities, other large population aggregates, and systems. Clinical practicum concentration on population-based public health nursing in culturally diverse settings, including health departments, health policy–institutional, and public service agencies. Emphasis on disease and dis- ease prevention at level of communities, aggregates, whole populations, and systems, both domestically and internationally. Letter grading.

165. Pediatric Nursing. (5) Lecture, three hours; clinical, six hours. Requisites: courses 162A, 162B, 162C, 161, 163, 165 (or 461), 462, 464, 465D. Theoretical content focuses on population-based approach to public health nursing in relation to health promotion and disease prevention at level of communities, other large population aggregates, and systems. Clinical practicum concentration on population-based public health nursing in culturally diverse settings, including health departments, health policy–institutional, and public service agencies. Emphasis on disease and dis- ease prevention at level of communities, aggregates, whole populations, and systems, both domestically and internationally. Letter grading.

166. Advanced Leadership and Role Integration. (5) Lecture, five hours. Leadership and management theories and models, resource allocation and man- agement, delegation, conflict, organizational impli- cations and practice, managed care, evaluation of prac- tice, continuous quality improvement, accreditation process for healthcare systems, and contemporary is- sues in workplace. Emphasis on integration of all pro- fessional role behaviors, application of research, and leadership-management of care as transition is made from student role to that of practicing professional nurse. Preparation for National Council Licensure Ex- amination (NCLEX), Letter grading.


171. Public Health Nursing. (6) Lecture, three hours; clinical, nine hours. Requisites: courses 161, 162D, 164, 165 (or 461), 462, 464, 465D. Theoretical content focuses on population-based approach to public health nursing in relation to health promotion and disease prevention at level of communities, other large population aggregates, and systems. Clinical practicum concentration on population-based public health nursing in culturally diverse settings, including health departments, health policy–institutional, and public service agencies. Emphasis on disease and dis- ease prevention at level of communities, aggregates, whole populations, and systems, both domestically and internationally. Letter grading.

173. Introduction to Research. (4) Lecture, four hours. Introduction to planning research project based on simple question. Specific components of research activities analyzed: specific aims and study purposes, variable definition, sample selection, data collection tools, data analyses, and ethical conduct in research studies. Critique of research reports. Letter grading.

174. Physical Assessment. (4) Lecture, three hours; laboratory, three hours. Designed to provide in-depth review and synthesis of physical assessment skills and knowledge covering lifespan. Individual study, use of audiovisual aids, physical assessment skills practice in laboratory, and required text are manda- tory. Letter grading.

175. Physical Assessment for Advanced Practice. (4) Lecture, three hours; laboratory, three hours. Com- prehensive review and synthesis of physical assess- ment principles and knowledge covering lifespan in diverse populations. Emphasis on history-taking re- lated to general health status and specific complaints, as well as detailed physical examination techniques. Individual study, use of audiovisual aids, physical assess- ment skills practice in laboratory, and required text are mandatory. Letter grading.

188. Special Topics in Nursing. (4) Lecture, three hours; discussion, one hour. One course to junior/senior Nursing majors. Departmentally sponsored experi- mental or temporary courses, such as those taught by visiting faculty members. May be repeated for credit. P/NP or letter grading.

190. Research Colloquia in Nursing. (1) Seminar, one hour. Designed to bring together students under- taking supervised tutorial research in seminar setting with one or more faculty members to discuss their
own work or related work in discipline. Led by one supervised faculty member. May be repeated for credit. P/NP grading.

193. Journal Club or Speaker-Series Seminars: Nursing. (1) Seminar, two hours; outside study, four hours. Limited to undergraduate students. Discussion of current literature in field or of topics related to guest speaker series. May be repeated for credit. P/NP grading.

196. Research Apprenticeship in Nursing. (2 to 4) Tutorial, one hour per unit. Limited to juniors/seniors. Entry-level research apprenticeship for upper-division students under guidance of faculty mentor. May be repeated for credit. Individual contract required. P/NP or letter grading.

197. Individual Studies in Nursing. (2 to 4) Tutorial, one hour. Limited to junior/senior Nursing majors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research or Senior Project in Nursing. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Individual research or project required. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses


201. Health-Related Quality of Life. (2) Lecture, two hours. Theoretical foundations of health-related quality of life as an outcome of disease, treatment, and style of care. Analysis of meaning, dimensions, predictors, measures, ethical dilemmas, cultural diversity issues, and biobehavioral foundations of health-related quality of life. Letter grading.

202. Philosophy of Nursing Science. (4) Lecture, four hours. Exploration of concepts of importance to philosophy of science as context for understanding philosophy of nursing science. Genealogies of thought, theoretical and methodological orientations about knowledge and knowledge development in relation to discipline of nursing, methods of inquiry (quantitative and qualitative), and scientific reasoning. Conceptual thinking (modern and contemporary) analyzed in relation to nursing research, nursing practice, and role of nurse scientists as leaders in relation to policy development in greater healthcare milieu. Letter grading.


203B. Statistical Approaches for Complex Nursing Phenomena. (4) Lecture, four hours. Requisite: course 203A. Use of multiple linear regression, including model validation, discriminant function analysis, canonical analysis, analysis of variance, factorial and repeated measure analysis of variance models, logistic regression, analysis of survival data. Letter grading.

204. Research Design and critique. (4) Lecture, 90 minutes; discussion, 90 minutes. Requisite: course 173 or equivalent upper-division basic research methodology course. Complex research designs and analysis of multiple variables, and research utilization. Emphasis on techniques for control of variables, data analysis, and interpretation of results. Analysis in depth of interrelationship of theoretical frameworks, design, sample selection, data collection instruments, and data analysis techniques. Content discussed in terms of clinical nursing research problems and how these apply to clinical settings. Letter grading.

205A. Introduction to Qualitative Methods in Research. (4) Lecture, four hours. Requisite: course 204. Use of grounded theory techniques to analysis of data. Grounded theory and its application to qualitative research design in nursing science. Examination of major methodologies that guide qualitative research in relation to various strategies for data collection (interviews, participant observation, analysis, and data interpretation. Scientific rigor and ethical concerns for research with human participants critically examined. Letter grading.

205B. Advanced Qualitative Research Methodology I (4) Lecture, four hours. Requisites: course 205A; submission of OPRS application for small pilot study in fall of second year. In-depth analysis of symbolic interactionism and pragmatism as foundation for study of grounded theory methodology as guide to study design development, including sampling plan, interview strategies for data collection, and basic coding. Exploration of self-reflexivity and ethics in relation to entrée to field, recruitment of pilot study participants, interviewing, and preliminary data analysis via analytic, theoretic, and reflective memos based on pilot study data collected. Letter grading.

205C. Advanced Qualitative Research Methodology II (4) Lecture, four hours. Requisite: course 205B. Advanced techniques for simultaneous collection and analysis of qualitative data. Introduction to grounded theory techniques and methodology as guide to analyzing clinical data as part of course. Letter grading.


207. Quantitative Research Designs of Clinical Phenomena. (4) Lecture, three hours; discussion, one hour. Requisite: course 203B. Use of quantitative research designs for testing clinical nursing phenomena. Emphasis on dynamic interaction between research process and theory, as well as on appropriateness of statistical tests, and their application to clinical research. Letter grading.


211. Women's Health Primary Care. (2 to 4) Lecture, three hours; discussion, one hour. Theory and research on assessment and management of women's health. Clinical topics include gynecology, family planning, pregnancy, and postpartum care, with emphasis on health promotion of women during reproductive years in primary care settings. Letter grading.

212. Family Healthcare Perspectives. (2) Lecture, two hours. Overview of conceptual frameworks related to contemporary family structure and function, with particular emphasis on Family is defined broadly to include nontraditional families; consideration of cross-cultural views of families as well. Identification of limitations of current theory and research related to family study and applicability of current knowledge to various problems encountered in care of families. Letter grading.


216A-216B-216C. Adult/Gerontology Concepts for Advanced Practice Nurses in Acute Care I, II, III. (4 each) Lecture, four hours. Enrollment in the following courses: courses 216A, 216B, 216C. In-depth analysis of symptom management (nausea and vomiting, dyspnea, fatigue, cognitive dysfunction, anemia, immunosuppression, anxiety, depression). Evidence-based practice guidelines provide comprehensive review of health promotion, acute, chronic, and late effects, and psychological concepts in long-term survivorship. Letter grading.


218C. Nursing Administration Practice. (4 each) Lecture, four hours. Requisite: course 218C. Focus on synthesizing organizational and management theories in relation to strategic planning and management, changing care delivery systems, human and financial resource management, decision making, management information systems, professional practice, and meeting accreditation and legal standards. Letter grading.
search and to examine state of science in their areas of focus. Core faculty from all specialty areas participate in discussions. May be repeated for a maximum of 10 units. S/U grading.


220. Theories of Instruction and Learning in Nursing. (3) Lecture, two hours. Theories of learning, curriculum and program development, and principles and techniques of evaluation. Examination of the teacher role of advanced practice nurse in variety of settings and with diverse cultural and socioeconomic groups. Opportunities provided for skill development in use of computerized information systems and development of instructional aids. Letter grading.

M221. Qualitative Research Design and Methodology for Indigenous Communities. (5) Same as American Indian Studies M202 and Health Policy and Management M202). Seminar, three hours. Introduction to some key theoretical themes in American Indian studies and exploration of methods that can be used to integrate and test the research on American Indian cultures, societies, languages, and other issues. Qualitative methods (design, appropriate use), with emphasis on qualitative research methods, ethics, and special considerations in conducting research on American Indian country. Design of research and exploration of feasibility of researching topics. Letter grading.


225A. Advanced Pharmacology I. (3) Lecture, two hours. Course 225A is enforced prerequisite to 225B. Basic pharmacology in addition to logical knowledge and skills necessary for care of clients/patients with stable acute or chronic conditions. Focus on major drug classes and their mechanisms of action, pharmacokinetics, adverse effects, and clinical uses. Letter grading.

225B. Advanced Pharmacology II. (2) Lecture, two hours. Enforced prerequisite: course 225A. Knowledge of and skills in pharmacology necessary for care of clients/patients with stable acute or chronic conditions. Letter grading.

226. Seminar: Aging Research. (1 to 2) Seminar, two hours. Preparation: completion of first-year coursework. Discussion and conceptualization of gerontological nursing concepts within context of specialty areas of research (acute care, oncology, occupational health, and gerontological nursing). Provides opportunity for students to integrate gerontological nursing concepts into their evolving dissertation research.
242F. Biobehavioral Foundations of Neuropsychiatric Nursing Care. (4) Lecture, four hours. Biologic and behavioral research from variety of disciplines, including nursing, for application to treatment of neuropsychiatric dysfunction. Exploration of research under- taking treatment interaction in cognitive, addictive, and affective dysfunctions, with emphasis on develop- ing a biobehavioral nursing approach. Letter grading.

245. Theoretical Foundations of Clinical Nurse Specialist Practice. (4) Lecture/discussion, four hours. Theoretical foundations of clinical nurse spe- cialist practice, including systems theory, behavioral sciences, interdisciplinary research, and application, emphasizing models of research utilization. Emphasis on application of relevant theories to clinical nurse specialty practice roles in healthcare systems through case- study analysis, with focus on application to clinical practice settings which include culturally diverse pop- ulations. Letter grading.

249. Meeting Health-Related Needs in Under- served Populations. (4) Lecture, four hours. Exam- ination of systematic barriers within healthcare set- tings that limit access to those in greatest need of cul- turally appropriate interventions. Unmet healthcare needs often result in health disparities and compro- mised health among underserved, uninsured, and marginalized populations. Analysis of cur- rent evidence-based strategies and interventions de- signed to address these clinical problems and im- proving health outcomes in these populations. Emphasis on presentation of context of healthcare financing, limited access, and public policy. Letter grading.

250. Ethical Issues, Social Justice, and History of Nursing. (5) Lecture, five hours. Interplay of social, cultural, political, scientific, and historical forces in the U.S. and global ethical, legal, and political forces in the U.S. form background for study of ethical issues related to role of nurses as advocates for social justice in contempo- rary society today. Analysis situated within context of historical and political forces. Emphasis on human rights and patient rights. Discussion of evolution of professional nursing within healthcare arenas in re- lation to ethical principles, cultural competence, and human diversity. Letter grading.


254A. Theoretical Foundations of MSN/MECN Role and Fundamentals of Professional Nursing Lecture/Clinical Skills Practicum I. (4) Lecture, three hours; laboratory, three hours. Practice of pro- fessional nursing as theory-based goal-directed method for assisting patients to meet basic human needs at various levels of health continuum, with em- phasis on critical evaluation of relevant theories to master's entry clinical nurse (MECN) practice roles in healthcare systems. Expansion of concepts of communication, interdisciplinary communication and collaboration, interpersonal relationships, cultural competence, and nursing process as clinical deci- sion-making strategy essential to practice of profes- sional nursing. Learning experiences in nursing skills laboratory and in clinical settings. Letter grading.


260. Secondary Prevention. (4) Lecture, four hours. Requisite: course 252. Corequisite: course 225A. Screening and early detection of illness to prevent chronic or deteriorating illness. Examining concepts of health and human development and using nursing process, application of nursing role in providing care to individuals and their families to screen for conditions that are preventable or amenable to appropriate interventions; identify possible time to prevent disability or premature mortality. Ex- amination of a health problems of individuals within context of family, social, and community systems, and interactive decision-making process. Emphasis on dif- ferences in developmental stages in response to screening for early and late signs and symptoms of ill- ness in ambulatory and acute care settings, commu- nity agencies, rehabilitation units, outpatient specialty clinics and surgical units, and home and community settings. Letter grading.


286. Healthcare Systems/Organizations. (3) Lecture, three hours. Analysis of evolving healthcare de- livery systems in terms of effects of policy, economic factors, structure and financing of organizations; characteristics of patients/populations, and services provided, all of which shape reform in role to role and practice of clinical nurse leaders. Letter grading.

287. Healthcare Policy. (3) Lecture, three hours. Analysis of healthcare delivery systems and policies im- pact clinical practice and healthcare delivery. Discussion of concepts related to policymaking, specifically how to formulate healthcare policy, how to affect po- litical processes, and stakeholders involved in policy decision making and implementation. Development of understanding of increasing levels of public, govern- mental, and third-party participation in and scrutiny of shape and direction of healthcare system. Current mandated assembly bills and their effect on nursing. Concepts associated with escalating healthcare costs and cost containment efforts instituted by private and governmental entities by individual health- care institutions. Letter grading.

288. Systems (Hospital Unit): Individual Level. (4) Lecture, four hours. Discussion of use of systems theory approach in providing patient-centered and value-added care. Functioning within systems, indi- vidual healthcare practitioners learn to use critical thinking and decision making to coordinate and de- liver quality and cost-effective patient care. Develop- ment of understanding of various models of orga- nizing nursing care within unit environment, managing care within multidisciplinary team framework, and promoting effective teamwork that enhances patient outcomes and ultimately reduces costs. Emphasis on concepts related to system theory, problem solving and decision making, nursing care delivery models, delegation, and team strategies. Letter grading.

289. Quality Improvement and Population-Based Quality of Practice. (4) Lecture, four hours. Principal elements related to quality improvement theories and ways in which quality management impacts delivery of patient-centered and value-driven care, including improved patient safety, value-based service delivery, efficient use of resources, quality improvement, and patient- population quality practice at organizational level. Re- view of individual methods to improve patient-care outcomes such as organizational support, effective teamwork, and quality-improvement concepts in workplace. Emphasis on quality management, ad- verse outcomes, evidence-based clinical and cost- conscious decision making, and risk reduction and re- duction, resource management, and external impacts on quality control. Letter grading.

M273. Advanced Seminar: Medical Anthropology. (2 to 4) Same as Anthropology M263Q, Community Health Sciences M244, and Psychiatry M273.) Sem- inar, three hours. Limited to 15 students. Examination of interrelationships between society, culture, ecology, health, and disease. Use of written critical analysis and discussion provided through key theoretical works. S/U or letter grading.

288. Variable Topics in Nursing. (4) Lecture, three hours; discussion, one hour. Variable topics; consult Schedule of Classes for topics to be offered in specific term. May be repeated for credit. S/U or letter grading.


295A. Nursing Science Seminar. (1) Seminar, one hour. Introduction to nursing research methods, activi- ties, and programs within specialty strats at UCLA School of Nursing; biobehavioral sciences, biologic sciences, health disparities/vulnerable populations, and health services. Exemplar work of UCLA nurse scholars highlighted. Overview of nursing research at UCLA and potential research opportunities for doc- toral study. S/U grading.

295B-295C. Nursing Science Seminars. (2-2) Sem- inar, five hours. Requisite: course 295A. Introduction to grant writing, with focus on preparing applications for National Student Research Award. Discussion of requirements of various extramural and specialty or- ganization funding sources; extramural funding criteria. Role of external funding to facilitate doc- toral and postdoctoral research, research activities, and professional development. S/U grading.

M296. Interdisciplinary Response to Infectious Disease Emergencies: Nursing Perspective. (4) (Same as Community Health Sciences M256, Medi- cine M256, and Oral Biology M256.) Lecture, three hours; discussion, one hour. Designed to instill in pro- fessional students integration of the emergency health problems and coordinated response, with spe- cific attention to bioterrorism. Examination of tools to help students prevent, detect, and intervene in infec- tious disease/emergencies. Interdisciplinary sessions also attended by students in Schools of Dentistry, Medicine, and Public Health during weeks two through five. Letter grading.

299A-299C. Nursing Research/Laboratory Experi- ences. (4-4) Seminar/discussion, one hour; research/ laboratory, three hours. Requisites: courses 202, 206. Seminars and research/laboratory-based experiences
to assist students to prepare for careers as scientists, with focus on research methodology and mentorship. S/U grading.

299D. Nursing Education Seminar. (2) Seminar, two hours; discussion, one to two hours. Seminar to assist students in development of academic settings, with focus on teaching. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

41A4-41B4. Clinical Practicum: Adult/Gerontology Acute Care Nurse Practitioners. In clinic practicum, 16 hours (course 41A4) and 22 hours (course 41B4). Enforced requisite: course 416C. Course 416A is enforced requisite to 41B4. Assessment of the adult/gerontology population. Students complete minimum of 160 direct clinical hours; for course 41B4, they complete minimum of 200 direct clinical hours. Letter grading.

41A4B-41D6. Adult/Gerontology Acute Care Nurse Practitioner Practicum I, II, (2-6) Clinic practicum, six hours (course 41A6) and 16 hours (course 41B6). Enforced requisite: course 440. Course 416A is enforced requisite to 41B6. Assessment and therapeutic interventions for selected health problems in adult/gerontology population. Developmental, health promotion, and maintenance needs of clients in relation to family, social, and cultural structures. For course 416A, students complete minimum of 40 direct clinical hours; for course 416B, they complete minimum of 160 direct clinical hours. Letter grading.

41C6-41D6. Adult/Gerontology Acute Care Nurse Practitioner Practicum I, II, (6 each) Clinic practicum, 16 hours. Enforced requisite: course 416B. Course 416C is enforced requisite to 41D6. Assessment and therapeutic interventions for selected health problems in adult/gerontology population. Developmental, health promotion, and maintenance needs of clients in relation to family, social, and cultural structures. For course 416A, students complete minimum of 40 direct clinical hours; for course 416B, they complete minimum of 160 direct clinical hours. Letter grading.

41E6. Adult/Gerontology Acute Care Nurse Practitioner Practicum V. (6 to 8) Clinic practicum, 15 to 24 hours. Enforced requisite: course 41D6. Assessment and therapeutic interventions for selected health problems in adult/gerontology population. Developmental, health promotion, and maintenance needs of clients in relation to family, social, and cultural structures. Students complete minimum of 160 to 240 direct clinical hours. Letter grading.

418A-418B-418C. Nursing Administration Practicum. (3 or 4 each) Clinic practicum, eight or 11 hours; clinical conference, one hour. Letter grading. 418A. Requisites: courses 219A, 219B. Synthesis, evaluation, and practical application of organizational theory in practice setting, with emphasis on content presented in course 218A, including organizational structure, culture, and management. For course 418A, students complete minimum of 160 to 240 direct clinical hours. Letter grading.


438C. Pediatric Nurse Practitioner Clinical Practicum III. (6) Clinic practicum, 18 hours. Corequisite: course 238C. Advanced comprehensive assessment, diagnosis, and management of chronic and acute pediatric illnesses in ambulatory setting. Clinical practicum, seminar, and other learning activities to demonstrate application and evaluation of evidence-based research and clinical guidelines in pediatric chronic and acute illnesses. Students complete minimum of 160 direct clinical hours. Letter grading.


439B. Adult/Gerontology Primary Care Nurse Practitioner Practicum II. (6) Clinic practicum, 18 hours. Requisite: course 439A. Corequisite: course 239B. Continuation of course 439A for advanced practice nurses, with emphasis on nursing management of acute and chronic health problems in selected populations. Developmental, health promotion, and maintenance needs of clients in relation to family, social, and cultural structures. Students complete minimum of 160 direct clinical hours. Letter grading.


439E. Adult/Gerontology Primary Care Nurse Practitioner Practicum V. (6) Clinic practicum, 27 hours. Requisites: courses 239C, 439D. Designed to prepare adult/gerontology primary care nurse practitioners with knowledge, skills, and competencies necessary to function as primary healthcare providers for young adults, adults, and older adults. Use of patient-centered framework of care for those who experience common acute and chronic illnesses, disabilities, health problems, and intervention in common illness-associated problems. Students complete minimum of 240 direct clinical hours. Letter grading.

440. Advanced Assessment and Clinical Diagnosis for Advanced Practice Nurse Practitioner Practicum, six hours. Practice foundations for advanced physical assessment and clinical diagnostic skills.
reasoning. Students conduct individualized patient and symptom-focused assessments of health problems representative of diverse client populations. Emphasis on comprehensive and integrated critical analysis of symptom and focused history data, physical examination, laboratory data, and clinical diagnoses. Letter grading.


445. Advanced Practice Nursing: Clinical Nurse Specialist Practicum. (2 to 10) Clinical practice, six to 30 hours. Requisites: courses 220, 245. Practicum/residency to gain skills and competencies to function collaboratively and autonomously to achieve high quality patient outcomes. Clinical nurse specialty (CNS) practice achieves this by working within a patient-focused approach, influence, patient, CNS, nursing personnel, and organizational systems utilizing multidisciplinary approach through application and integration of theory, research, and clinical knowledge. 17 units complete minimum of 500 unique CNS hours required for professional certification. Letter grading.

450. Advanced Practice Nursing: Clinical Elective Independent Study. (2 to 8) Clinical practice, eight to 300 hours. Designed to enhance skills and competencies in student-selected advanced practice specialty or related practice dimension, with emphasis on application and integration of theory and evidence-based practice knowledge. S/U grading.


465B. Tertiary Prevention and Care of Medical-Surgical Patients and Families. (8) Lecture, four hours; clinical, six hours. Requisite: course 465A. Pathophysiological and psychosocial aspects of assessment and management for selected acute and emergent problems of adult patients with complex illness, including acute, chronic, and life-limiting illness. Nursing assessment and management for selected acute and emergent problems of adult patients with complex illness, including acute, chronic, and life-limiting illness for purpose of planning, implementing, and evaluating care of patients, both as individuals and cohorts. Letter grading.

465C. Tertiary Prevention and Care of Geriatric Medical-Surgical Patients and Families. (8) Lecture, four hours; clinical, 12 hours. Requisites: courses 465A, 465B. Examination of nursing assessment and management of acute and chronic health problems of older adults. Theory content in assessment, health history, and diagnostic reasoning on older adults, with emphasis on social, cultural, and developmental influences. Integration of knowledge of pathophysiology, pharmacology, therapeutic interventions, and communication concepts as applied to care of medical and surgical patients. Supervised practicum experience within settings of multidimensional teams directing care in multiple clinical units, with focus on clinical interpretation of assessment and diagnostic data for purpose of planning, implementing, and evaluating care of patients, both as individuals and cohorts. Letter grading.


495. Nursing Education Practicum. (2) Seminar, six hours. Supervised student teaching internship in preparation for academic roles. In-depth opportunity to gain skills in role of nurse educator within university setting, including application of instructional strategies and evaluation methods. S/U grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA assistant dean and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. No more than 8 units may be applied toward MSN. degree minimum course requirement; may not be applied toward minimum graduate course requirement. S/U grading.

596. Directed Individual Study or Research. (2 to 12) Tutorial, to be arranged. Opportunity for individual graduate nursing students to pursue special studies or research interests. May be repeated for credit, but only 4 units may be applied toward graduate degree requirements. S/U grading.

597. Individual Study for Comprehensive Examina- tion. (2) Tutorial, to be arranged. Opportunity for individual graduate nursing students to prepare for comprehensive examination. May be repeated once for credit, but only 4 units may be applied toward MSN. degree minimum course requirement. S/U grading.

599. Research for and Preparation of PhD Disserta- tion. (2 to 12) Tutorial, to be arranged. Individualized faculty supervision of PhD dissertation research by student’s chair. May be repeated for credit, but only 4 units may be applied towards PhD degree requirements. S/U grading.

OBSTETRICS AND GYNECOLOGY

David Geffen School of Medicine
27-139 Center for Health Sciences
Box 951740
Los Angeles, CA 90095-1740
310-206-6575
http://obgyn.ucla.edu

Andrea J. Rapkin, MD, Interim Chair and Executive Vice Chair
Robin P. Farias-Eisner, MD, PhD, Vice Chair, Administration
Michael T. Johnson, MD, Vice Chair, Clinical Affairs
Brian J. Koos, MD, DPhil, Vice Chair, Academic Affairs
Ott Martinez, PhD, Vice Chair, Basic Research
Khali Tabsh, MD, Vice Chair, Network/Satellite Development
William Growdon, MD, Vice Chair, Santa Monica-UCLA
Christian H. Kischneider, MD, Vice Chair, Obstetrics and Gynecology
Sarah J. Kilpatrick, MD, PhD, Vice Chair,
Ophthalmology

Scope and Objectives

The medical student program in the Department of Obstetrics and Gynecology is designed to provide students with firm background in the essentials of women's health. The educational objectives are set forth by the Association of Professors of Gynecology and Obstetrics (APGO). Through a combination of didactic instruction and supervised clinical experience, students acquire the relevant clinical skills of history taking and physical examination and learn reproductive physiology from infancy to the postmenopausal period; antepartum, intrapartum, and postpartum obstetric care; and recognition and management of various gynecologic disorders. Third-year students work in ambulatory clinics and on inpatient services during a six-week core clerkship. Greater depth of experience is provided by elective clerkships during the fourth year that emphasize subspecialties such as maternal/fetal medicine, reproductive endocrinology and infertility, gynecologic oncology, and reproductive health.

For more details on the Department of Obstetrics and Gynecology, see the department website.

Oral Biology

Scope and Objectives

Oral biology is the area of knowledge that deals with the development, structure, and function of the oral tissues and their interrelationships with other organ systems in normal and disease states. It is a multidisciplinary field that includes cell biology, bone biology, molecular biology, biochemistry, neuroscience, immunology, microbiology, and virology. The objective of the graduate program is to provide students with a sound foundation in these areas in order to pursue an academic or research career.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Section of Oral Biology in the School of Dentistry offers Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Oral Biology. A combined DDS/Oral Biology MS or PhD or advanced certificate training/Oral Biology MS or PhD is also offered.

Oral Biology

Graduate Courses

201A, 201C. Advanced Oral Biology. (3-3) Lecture, three hours. S/U or letter grading.

201A. Ontogenesis. (3) Lecture, three hours. Evolutionary perspective of cellular development from simple molecules that were formed during first billion years of Earth to development of cells, tissues, and organs of invertebrates and vertebrates. Development of vertebrate feeding apparatus from comparative anatomical and physiological point of view, followed by embryogenesis of orofacial and dental structures of humans. S/U or letter grading.

201C. Pathobiology. (3) Lecture, three hours. Molecular basis for pathogenic processes in tissues of oral cavity. Topics include microbially mediated demineralization of hard tissues, soft tissue infections, carcinogenesis, colonization of mucosal substrates by opportunists, etc. S/U or letter grading.


205A. Methodology in Research Design and Data Analysis. (2) Lecture, two hours. Designed for graduate oral biology students. Integration of didactic lectures in descriptive and inferential statistics and in research design (emphasis on experimental design), presentations of statistical software, and open discussion of specific needs of oral biology students when they design their research. Letter grading.


205C. Advanced Seminar: Comparative Effectiveness Research. (2) Lecture, two hours; discussion, one hour. Requisites: courses 205A, 205B (may be taken concurrently). Hands-on experience in process of systematic review, as shared mechanism in comparative effectiveness and evidence-based research. Specialized topics include level and quality of evidence assessments, acceptable sampling analysis, meta-analysis and meta-regression, and Bayesian-derived decision making following utility versus logic model. Students work on examples of their choice and interest in oral biology, medicine, and orthodontics. Letter grading.

206. Current Topics in Oral Immunology. (2) Lecture, two hours; discussion, one hour. Introduction to fundamentals and technical aspects of immunology and proteomics and analysis of data derived therefrom. Discussion of implications and applications of genetics and proteomics in diagnostic protocols such as salivary diagnostics. Letter grading.

207. Oral Immunology in Preparation. (2) Seminar, two hours. Required course in scientific ethics for graduate students in Oral Biology MS and PhD programs and for NRSA trainees in School of Dentistry. Letter grading.

211. Biology of Temporomandibular Joint. (2) Lecture, two hours. Anatomy, histology, physiology, and biomechanics of temporomandibular joint (TMJ) and related musculature. Pain mechanisms, sensorimotor integration, and motor mechanisms in TMJ function, and current methods of TMJ imaging. S/U or letter grading.

212. Proseminar: Oral Biology Research. (2) Seminar, one hour; discussion, one hour. Introductory course for graduate MD students. Guest seminars on topics related to oral biology (pain pathways, immunology, bone biology, microbiology, cancer, and salivary genomics), followed by discussions led by course chair. Letter grading.

214. Current Research in Osteoimmunology. (2) Seminar, one hour; discussion, one hour. Exploration of oral bone biology and immunology and how both systems talk to each other. Topics include immune modulation of bone metabolism; osteoclast; osteoblast; osteoprogenitor behavior for hematopoietic progenitors, adult bone marrow; stem cell changes, and osteonecrosis in at-risk populations. Letter grading.

215A. Fundamentals of Immunology. (2) Lecture, two hours. Basic concepts of cellular and molecular mechanisms involved in responses mediated by immune effectors, with emphasis on immunopathology involved in autoimmune, cancer, and immunodeficiency syndromes. Letter grading.

215B. Current Advanced Research Topics in Immunology. (2) Seminar, one hour; discussion, one hour. Overview of rapidly changing discoveries in very important field of immunology. Directed and student-led discussions of current cutting-edge research developments in immunology. Letter grading.

220. Integrative Biology and Biomaterials Science in Relation to Dentistry. (2) Lecture, one hour; laboratory, 90 minutes. Introduction to integrative biology and biomaterials science by bringing together diverse disciplines that complement one another to unravel complexity of biology in biomaterials in relation to dentistry. Integration of bioengineering, materials sciences, cell biology, and dentistry. Fundamentals of materials science in relation to dentistry, stem cell biology, and knowledge necessary to participate in dental and biomedical research, innovation, and product development. Letter grading.

221. Advanced Dental Materials. (2) Lecture, one hour; laboratory, 90 minutes. Preparation of individuals for academic and research careers in dental materials science or broader area of biomaterials relevant to clinical dental practice. Fundamentals of dental materials and knowledge necessary to participate in research and product development. Introduction to dental materials and classes of materials used in dentistry, including polymers, metals, and ceramics, and providing up-to-date information on dental materials currently used in clinical dentistry. Letter grading.

226. Craniofacial Growth and Development. (2) Lecture, two hours. Preparation: strong background in histology and embryology. Students acquire from scientific literature discussed in lecture/seminar format, advanced knowledge of relevant aspects of human biology as they apply to clinical and current concepts of principles governing growth and development of craniofacial structures required to present seminars on assigned topics that aid their understanding and analysis of course content that has application to their specific and professional fields. Letter grading.

227. Dental Embryology and Histology. (2) Lecture, two hours. Description and interpretation of important stages in development of orofacial apparatus and histological features of its component tissues. Critique of scientific literature relevant to course content and analysis of current state of knowledge about selected features of orofacial apparatus that are of significance to clinical dental specialists. S/U or letter grading.

228. Dental Pharmacology and Therapeutics. (2) Lecture, one hour; discussion, one hour. Introduction to pharmacology, with particular emphasis on how drugs interact with dentistry, General principles of drug action and drug effects on autonomic and central nervous systems. S/U or letter grading.

229A. Culture, Ethnicity, and Health: Implications for Oral Biology and Medicine. (2) Seminar, one hour; discussion, one hour. Examination of sociocultural, biologic, and genetic anthropologic theory to understand factors that influence health and well-being, experience and distribution of illness, prevention and treatment of sickness, healing processes, social relations of therapy and cultural importance and utilization of pluralistic medical systems. Theory, perspectives, and methods from clinical medicine, public health, epidemiology, demography, and social sciences. Letter grading.

229B. Anthropological Perspectives on Global Health: Implications for Oral Biology and Medicine. (2) Seminar, one hour; discussion, one hour. What factors determine health, illness, and disease in global context, including political ecology of infectious diseases, child health issues, women’s health and reproductive health, global trade in legal and illegal drugs, demography and health transition, structural adjustment, and globalization of pharmaceutical industry; antibiotic resistance, and globalization and health equity. Letter grading.

234. Seminar: Developmental Neuroendocrinology. (2) Seminar, two hours. Designed for graduate students. Psychological and physiological processes intertwine, and one important aspect of psychoneuroimmunological research is characterization of the mechanisms and these interactions. Examination of current literature on neuroimmune interaction from developmental perspective. S/U or letter grading.

M256. Interdisciplinary Response to Infectious Disease Emergencies: Dentistry Perspective. (4) (Same as Community Health Sciences M256, Medicine M256, and Nursing M298.) Lecture, three hours; discussion, one hour. Designed to instill in professionals students ideas of common emergency health problems and coordinated response, with specific attention to bioterrorism. Examination of tools to help students prevent, detect, and intervene in infectious disease emergencies. Interdisciplinary sessions also attended by students in Schools of Medicine, Nursing, and Public Health during weeks two through five. Letter grading.


273. Research in Clinical Immunology and Lymphoid Systems. (2) Lecture, one hour; discussion, one hour. Forum for discussion of cutting-edge topics in immunology and lymphology from clinical perspective. Emphasis on immune surveillance and lymphatic drainage of oral pathogens associated with AIDS and other diseases. Letter grading.

275. Molecular and Cell Biology for Oral Biology Graduate Students. (3) Lecture, two hours; literature review, one hour. Advanced course on prokaryotic and eukaryotic molecular and cell biology, with emphasis on applications in dental research. Letter grading.

596. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. S/U or letter grading.

597. Preparation for PhD Qualifying Examinations. (4 to 8) Tutorial, to be arranged. S/U or letter grading.


ORTHOPAEDIC SURGERY

David Geffen School of Medicine

76-143 Center for Health Sciences
Box 956902
Los Angeles, CA 90095-6902
310-825-6557
http://ortho.ucla.edu

Frances J. Hornicek, MD, Chair
John S. Adams, MD, Vice Chair, Research
Sharon L. Hame, MD, Director, Medical Student Education

Scope and Objectives

The medical student program in the Department of Orthopaedic Surgery is designed to provide students with experience in understanding the diagnosis and management of disorders of the musculoskeletal system. Through a combination of didactic instruction and supervised clinical experience, students acquire the clinical skills of history taking and physical examination of the musculoskeletal system. Diagnosis and orthopaedic management of bone and soft tissue trauma, skeletal development defects, tumor, spinal disorders, foot disorders, and arthritis are primary objectives. Third-year students work in ambulatory clinics and on inpatient services during their core surgical clerkship. Fourth-year electives provide the opportunity for in-depth experience on rotations at the Reagan UCLA Medical Center and affiliated institutions and emphasize subspecialties such as joint replacement, sports medicine, orthopaedic oncology, metabolic bone disorders, hand and foot surgery, spinal surgery, and pediatric orthopaedics.
Pathology and Laboratory Medicine

David Geffen School of Medicine

1P-171 Center for Health Sciences
Box 951732
Los Angeles, CA 90095-1732

310-825-8119
ehom@mednet.ucla.edu
http://pathology.ucla.edu/education

Jonathan Braun, MD, PhD, Chair

Professors

Luciano Barajas, MD, in Residence
Linda G. Baum, MD, PhD
Scott W. Binder, MD (Pritzker Family Endowed Professor of Pathology)
Jonathan Braun, MD, PhD
Gay M. Crooks, MBBS (Rebecca Smith Professor of Molecular and Cellular Pathology)
Kenneth A. Dorschkind, PhD
Thomas A. Drake, MD, in Residence
Samuel W. French, MD, in Residence
Paul C. Fu, MD, in Residence
Ben J. Glasgow, MD (Wasserman Professor of Ophthalmology)
Wayne W. Grody, MD, PhD
Charles R. Lassman, MD, PhD
Cynthia C. Nast, MD
Scott D. Nelson, MD
Stanley F. Nelson, MD, in Residence
Charalabos Pothoulakis, MD
Jian Yu Rao, MD
Elaine F. Reed, PhD, in Residence (Daljit S. and Elaine Sarkaria Endowed Professor of Diagnostic Medicine)
Jonathan W. Said, MD, PhD
Robert H. Schiestl, PhD
Michael A. Tuttell, MD, PhD (Lya and Harrison Latta Endowed Professor of Pathology)
James G. Tidball, PhD
Peter J. Tontozon, MD, PhD (Frances and Albert Plansky Professor of Anatomy)
David M. Underhill, PhD, in Residence
Harlin L. Wang, MD, PhD
Anna M. Wu, PhD
Haodong Xu, MD, PhD, in Residence
William H. Yong, MD
Xianghong Jasmine Zhou, PhD

Associate Professors

David W. Dawson, MD, PhD, in Residence
Samuel Wheeler French, Jr., MD, PhD, in Residence

Assistant Professors

Maria I. Cobos Siliero, MD, PhD
Bogdan Pasaniuc, PhD
Dinesh S. Rao, MD, PhD

Adjunct Professors

David W. Gjertson, PhD
Joseph M. Miller, PhD
M. Elena Stark, MD, PhD
Robert B. Trelaxe, PhD

Adjunct Associate Professors

Christina A. Ghiani, PhD
Wenyuan Li, PhD

Adjunct Assistant Professors

Bita Behjatinia, PhD
Joel A. Garno, MD
James P. Lister, PhD
Shelley Miller, PhD
Stephen P. Schettler, PhD

Scope and Objectives

Pathology is the branch of medicine concerned with the causes and development of disease. The goal of the cellular and molecular pathology (CMP) graduate program is to provide students with the knowledge to integrate findings at the molecular, cellular, and systemic levels to understand the causes and progression of disease.

Coursework is designed so that students gain an in-depth knowledge of cell and molecular biology, genetics, and disease mechanisms. Didactic instruction is complemented by participation in seminars and training in the design and execution of original laboratory research. As a result, graduates obtain the expertise to translate and answer questions defined in the clinical area to the laboratory bench and vice versa. For more information, see the department website.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Courses


222. Hematopoiesis: Basic Biology and Clinical Implications. (4) Lecture, three hours; discussion, one hour. Senior undergraduate students considered on case by case basis. In-depth study of concepts and paradigms in hematopoietic development. Mammalian hematopoiesis and normal development, with focus on molecular regulation of cellular development and equal emphasis on conceptual and experimental aspects of knowledge in field. Discussion of important pathological states within hematopoietic system, as well as established and novel avenues for therapy. Topics include hematopoietic stem cells and niche, transcriptional and epigenetic regulation of hematopoiesis, B- and T-lymphocyte development, myeloid, erythroid, and platelet development, immune responses, myeloid and lymphoid neoplasia, and bone marrow transplantation/gene therapy. S/U or letter grading.

Graduate Degrees

The Department of Pathology and Laboratory Medicine offers Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Cellular and Molecular Pathology. Applicants interested in studying with faculty in the department are encouraged to apply to an appropriate home area in Graduate Programs in Bioscience.

Pathology and Laboratory Medicine

Upper-Division Courses

199. Directed Research in Orthopaedic Surgery. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research in Pathology. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research in Pathology. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research in Pathology. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research in Pathology. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research in Pathology. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research in Pathology. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.
M229. Molecular Mechanisms of Host/Pathogen Interaction. (4) (Same as Microbiology M229.) Lecture, two hours; discussion, two hours. Enforced requisites: Molecular Biology 254A through 254D. Molecular mechanisms of microbial interactions with eukaryotic host cells that result in disease or pathogen survival. Topics include pathogenesis of common viruses, bacteria, fungi, and parasites, basis of toxin-mediated cellular damage, and immune suppression of microbial tissue damage. Letter grading.

M237. Cellular and Molecular Basis of Disease. (4) (Same as Biological Chemistry M237.) Lecture, two hours; laboratory, two hours. Preparation: one course each in cell biology and biological chemistry. Discussion of key issues in disease mechanisms, with emphasis on experiments leading to understanding of these mechanisms. Identification of important questions still remaining unanswered. Letter grading.

238. Histology and Pathology for Graduate Students. (2) Laboratory, two hours. Designed for UCLA ACCESS or Cellular and Molecular Pathology PhD students. Basic introductory knowledge of normal tissue, pathologic processes, and animal models as observed by light microscopy. Letter grading.

240. Transplantation Immunology from Benchside to Bedside. (4) Lecture, three hours; laboratory, one hour. Instructor: basis of basic immunology. Limited to graduate students. New developments in organ transplantation, updates on basic science of immune mechanisms, integration of basic science principles with clinical practice. Letter grading.

M255. Mapping and Mining Human Genome. (3) (Same as Human Genetics M255.) Lecture, three hours. Basic molecular genetic and cytogenetic techniques of gene mapping. Selected regions of human genomic map scrutinized in detail, particularly gene families and clusters of genes that have remained linked from mouse to human. Discussion of localization of disease genes. S/U or letter grading.

256. Seminar: Viral Oncology. (2) Seminar, two hours. Advanced research seminar designed to consider current developments in field. Selection of current subjects and publications dealing with tumor viruses, oncogenesis, development, and cellular regulation. S/U or letter grading.

M257. Introduction to Toxicology. (4) (Same as Pharmacology M257.) Require: Pharmacology M241. Biochemical and systemic toxicology, basic mechanisms of toxicity, and interaction of toxic agents with specific organ systems.

M258. Pathologic Changes in Toxicology. (4) (Same as Pharmacology M258.) Design to give students experience in learning normal histology of tissues and organs and to appreciate the range of pathologic changes that occur in these tissues (liver, bladder, lung, kidney, nervous system, and vascular system).

260. Immunopathology. (4) Lecture, two hours; discussion, one hour; laboratory, one hour. Requisite: Microbiology 261. Advanced information for graduate and advanced undergraduate students regarding immune system anatomy, lymphocytic development, acute and chronic inflammation, hypersensitivity, and autoimmunity. Letter grading.

262. Cytogenetics and Genomics. (3) Lecture, three hours. Comprehensive guide so students gain sufficient knowledge in conventional and state-of-art cytogenetic and genomic principles and techniques and their utility in clinical and research applications. Focus on relationship between various chromosomal and genomic abnormalities in humans as identified by basic and advanced technologies such as fluorescence in situ hybridization (FISH), chromosomal microarray analysis (CMA), and next-generation sequencing (NGS). "Hands-on" experiments of molecular cytogenetics and cytogenomics through didactic teaching sessions, journal clubs, and interactive discussions. S/U or letter grading.

270. Basic and Clinical Aspects of Developmental Hematology. (4) Lecture, two hours. Graduate- and postgraduate-level course that covers broad range of topics in both basic and clinical aspects of develop-
Graduate Course
M215. Interdepartmental Course: Tropical Medicine. (Same as Medicine M215 and Pathology M215.) Lecture, two and one half hours. Preparation: basic courses in microbiology and parasitology of infectious diseases in School of Medicine or Public Health; Study of current knowledge about diseases prevalent in tropical areas of world. Major emphasis on infectious diseases, with coverage of problems in nutrition and exotic noninfectious diseases. Syllabus supplements topics covered in classroom. S/U grading.

PHARMACOLOGY
See Molecular and Medical Pharmacology

PHILOSOPHY
College of Letters and Science
321 Dodd Hall
Box 951451
Los Angeles, CA 90095-1451
310-825-4641
philcounselor@humnet.ucla.edu
http://www.philosophy.ucla.edu

Seana Shiffrin, JD, DPhil, Chair

Professors
Tyler Burge, PhD (Mr. and Mrs. C. N. Flint Professor of Philosophy)
John P. Carriero, PhD
Mark D. Greenberg, JD, DPhil
Barbara Herman, MA, PhD (Gloria and Paul Griffin Professor of Philosophy)
Pamela Hieronymi, PhD
David B. Kaplan, PhD (Hans Reichenbach Professor of Scientific Philosophy)
Calvin E. Lawrence, DPhil
Calvin G. Normore, PhD
Joseph Almog, DPhil
Marilyn McCord Adams, PhD
David B. Kaplan, PhD (Hans Reichenbach Professor of Scientific Philosophy)
Seana Shiffrin, JD, DPhil
Sheldon R. Smith, PhD

Professors Emeriti
Marilyn McCord Adams, PhD
Robert Merritt Adams, PhD
Joseph Almog, DPhil
Brian P. Copenhaver, PhD (Steve F. and Christine L. Udvar-Hazy Professor Emeritus)
Donald A. Martin, BS
Herbert Morris, LLB, DPhil
Terence D. Parsons, PhD

Associate Professors
Samuel J. Cumming, PhD
Alexander J. Julius, PhD

Assistant Professors
Joshua D. Armstrong, PhD
Adam D. Crager, PhD
Daniela J. Dover, PhD
Katrina J. Elliott, PhD
Gabriel J. Greenberg, PhD

Lecturers
Andrew Hsu, PhD
Steven R. Levy, PhD

Scope and Objectives
Philosopher, translated from the Greek, means lover of wisdom. The term has come to mean someone who seeks knowledge, enlightenment, and truth. The Department of Philosophy undergraduate program is not directed at career objectives (although it is traditionally good preparation for law, theology, and graduate work in philosophy). Philosophy is taught to undergraduate students primarily as a contribution to their liberal education. All of the lower and most of the upper-division course offerings should be of interest and useful to students who are reflective about their beliefs or who wish to become so. It also provides students with the occasion to ponder the foundations of almost any other subject to which they are exposed—whether history, religion, government, law, or science.

The principal goal of the graduate program is to produce philosophers of high quality, thinkers informed by the great historical traditions of Western philosophers who can apply the methods of philosophical analysis to a broad range of current philosophical problems. Since all its graduate students hope to teach at the college or university level, the department is also committed to training clear, able, and stimulating teachers.

The department offers programs leading to the Bachelor of Arts and PhD degrees.

Undergraduate Study

Philosophy BA

Preparation for the Major

Required: Four lower-division courses, including Philosophy 7 or 21, 22, 31, and one other lower-division philosophy course.

Transfer Students

Transfer applicants to the Philosophy major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one philosophy of mind or skepticism and rationality course, one ethical theory course, one symbolic logic course, and one additional philosophy course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Thirteen upper-division (100 series) or graduate (200 series) philosophy courses (52 units), including Philosophy 100A, 100B, 100C. Seven of the 13 courses must be distributed among the groups into which the undergraduate and graduate courses are divided—history of philosophy; logic, semantics and philosophy of science; ethics and value theory; and metaphysics and epistemology. Students must take two courses in each of three of the groups and one course in the remaining group.

Contract courses (199) may be applied toward the major but not toward a group requirement. A maximum of 8 units of course 199 may be applied toward the major but not toward a group requirement. Courses 100A, 100B, 100C may not be applied toward any group requirement. No course used to satisfy the major or preparation requirements may be taken on a P/NP basis.

Students intending to do graduate work in philosophy should consult with both the graduate and undergraduate advisers.

Honors Program

Admission

To be admitted to the honors program, students must have taken at least three upper-division philosophy lecture or seminar courses at UCLA with an overall grade-point average of 3.7.

Requirements

To be awarded honors in philosophy at graduation, Philosophy majors must (1) have a 3.7 grade-point average in UCLA philosophy courses and a 3.7 GPA in upper-division UCLA philosophy courses; (2) satisfy the honors directed study requirement by taking Philosophy 198A and 198B in conjunction (usually, but not necessarily concurrently) with two different regular upper-division philosophy courses supervised by the instructors of those courses; and (3) receive a grade of A- or better in each course applied toward satisfaction of the honors requirement.

Students may substitute Philosophy 191 for either course 198A or 198B or, alternatively, may complete up to two philosophy graduate seminars in lieu of courses 198A and/or 198B. For an undergraduate or graduate seminar to be applied toward the honors directed study requirement, the consent of both the seminar instructor and the faculty honors adviser is required in advance. Students may also substitute up to one 4-unit Philosophy 199 course in which they produce a substantial paper that represents an original piece of research or its equivalent.

Exceptional work done to satisfy the honors requirement may be submitted to the department chair for consideration for highest honors.

Philosophy Minor

To enter the Philosophy minor, students must have an overall grade-point average of 2.0 or better.

Required Lower-Division Courses (8 units): Philosophy 7 or 21, and 22 or 31.

Required Upper-Division Courses (24 units): Five courses, including at least one from each of the four groups into which the undergraduate and graduate courses are divided (Philosophy 100A, 100B, 100C apply toward Group I); one additional upper- or lower-division philosophy course.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.
Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of Philosophy offers Master of Arts (MA), Candidate in Philosophy (CPhl), and Doctor of Philosophy (PhD) degrees in Philosophy. A concurrent degree program (Philosophy PhD/Law JD) is also offered.

Philosophy

Lower-Division Courses
1. Beginnings of Western Philosophy. (5) Lecture, three hours; discussion, one hour. Origins of Greek cosmo-theology and philosophy, beginnings of systematic thought and scientific investigation concerning such questions as origin and nature of the material world, concept of laws of nature, possibility and extent of knowledge. Concentration on pre-Socratic philosophers, particularly Anaximander, Heraclitus, the Pythagoreans, Parmenides, Empedocles, and Greek atomists, during first two thirds of course and on Sophokles and some earlier works of Plato in last few weeks. P/NP or letter grading.

2. Introduction to Philosophy of Religion. (5) Lecture, four hours; discussion, one hour. Introductory study of such topics as nature and grounds of religious belief, relation between religion and ethics, nature and existence of God, problem of evil, and what can be learned from religious experience. P/NP or letter grading.

3. Historical Introduction to Philosophy. (5) Lecture, three hours; discussion, two hours. Historical introduction to Western philosophy based on classical texts dealing with major problems, related thematically and studied in chronological order: properties of rational argument, existence of God, problem of knowledge, nature of causality, relation between mind and body, possibility of justice, and others. P/NP or letter grading.

4. Philosophical Analysis of Contemporary Moral Issues. (5) Lecture, three hours; discussion, one hour. Critical study of principles and arguments advanced in discussion of current moral issues. Possible topics include revolutionary violence, rules of warfare, sexual morality, right of privacy, punishment, nuclear warfare and deterrence, abortion and mercy killing, experimentation with human subjects, rights of women. P/NP or letter grading.

5. Philosophy in Literature. (5) Lecture, three hours; discussion, one hour. Philosophical inquiry into such themes as freedom, responsibility, guilt, love, self-knowledge and self-deception, death, and meaning of life through examination of great literary works in Western tradition. P/NP or letter grading.

6. Introduction to Political Philosophy. (5) Lecture, three hours; discussion, one hour. Study of some classical or contemporary works in political philosophy. Questions that may be discussed include What is justice? Why obey the law? Which form of government is best? How much personal freedom should be allowed in society? P/NP or letter grading.

7. Introduction to Philosophy of Mind. (5) Lecture, three hours; discussion, one hour. Introductory study of philosophical issues about nature of the mind and its relation to the body, including materialism, functionalism, behaviorism, determinism and free will, nature of psychological knowledge. P/NP or letter grading.

8. Introduction to Philosophy of Science. (5) Lecture, three hours; discussion, one hour. Study of selected problems concerning the character and reliability of scientific understanding, such as nature of scientific theory and explanation, reality of theoretical entities, concentration on pre-Socratic philosophers, and occurrence of scientific revolutions. Discussion at nontechnical level of episodes from history of science. P/NP or letter grading.

9. Principles of Critical Reasoning. (5) Lecture, four hours; discussion, one hour. Nature of arguments: how to analyze them and assess soundness of reasoning they represent. Common fallacies that often occur in arguments are discussed in light of what counts as good deductive or inductive inference. Other topics include use of language in argumentation to arouse emotions as contrasted with conveying thoughts, logic of scientific experiments and hypothesis testing in general, and some general ideas about probability and its application in making normative decisions (e.g., betting). P/NP or letter grading.

21. Skepticism and Rationality. (5) Lecture, four hours; discussion, one hour. Can we know anything with certainty? How can we justify any of our beliefs? Introduction to study of these and related questions through works of some great philosophers of modern period, such as Hume, Leibniz, or Berkeley. P/NP or letter grading.

22. Introduction to Ethical Theory. (5) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 22W. Recommended or required for students in courses in Group III. Systematic introduction to ethical theory, including discussion of egoism, utilitarianism, justice, responsibility, meaning of ethical terms, relativism, etc. P/NP or letter grading.

22W. Introduction to Ethical Theory. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Limited to freshmen/sophomores. Not open for credit to students with credit for course 22. Introduction to major ethical theories in Western thought. Examination of works of Plato, Aristotle, Hume, Kant, and Mill. Topics include ideas of virtue, obligation, egoism, relativism, and foundations of morals. Four papers required. Satisfies Writing II requirement. Letter grading.

23. Meaning and Communication. (5) Lecture, three hours; discussion, one hour. Discussion of meaning and its relationship to philosophy more generally; nature, origins, and acquisition of language. Additional topics may include nonlinguistic and nonhuman systems of communication; interpretation in law, literature, and art; use of theoretical terms in science. P/NP or letter grading.

31. Logic, First Course. (5) Lecture, four hours; discussion, one hour. Recommended for students who plan to pursue more advanced studies in logic. Elements of symbolic logic, sentential and quantificational; forms of reasoning and structure of language. P/NP or letter grading.

31. Logic, Second Course. (5) Lecture, four hours; discussion, one hour. Recommended for students who plan to pursue more advanced studies in logic. Elements of symbolic logic, sentential and quantificational; forms of reasoning and structure of language. P/NP or letter grading.

37. Freshman Seminar. (4) Variable topics; consult Schedule of Classes or "Department Announcements" for topics to be offered in a specific term. May be repeated for credit with consent of instructor.

Upper-Division Courses
100A. History of Greek Philosophy. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Survey of origins of Greek metaphysics from pre-Socratics through Plato and Aristotle. P/NP or letter grading.

100B. Medieval and Early Modern Philosophy. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Strongly recommended requisite: course 100A. Survey of development and transformation of Greek metaphysics and epistemology within context of philosophical theology, and transition from medieval to early modern period. Special emphasis on Augustine, Anselm, Aquinas, and Descartes. P/NP or letter grading.

100C. History of Modern Philosophy, 1650 to 1800. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Strongly recommended requisite: course 100B. Courses 100A, 100B, and 100C should be taken in immediately successive terms if possible. Survey of development of metaphysics and theory of knowledge from 1650 to 1800, including Locke and/or Berkeley, Malebranche and/or Leibniz, and culminating in Hume and Kant. Topics may include views of these (and perhaps other) philosophers of the period on mind and body, causality, existence of God, skepticism, empiricism, limits of human knowledge, and philosophical foundations of modern science. P/NP or letter grading.

Group I: History of Philosophy
M101A. Plato—Earlier Dialogues. (4) Same as Classics M146A. Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Study of selected topics in early and middle dialogues of Plato. P/NP or letter grading.

M101B. Plato—Later Dialogues. (4) Same as Classics M146B. Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Study of selected topics in middle and later dialogues of Plato. P/NP or letter grading.

M102. Aristotle. (4) Same as Classics M147. Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Study of selected works of Aristotle. P/NP or letter grading.

M103A. Ancient Greek and Roman Philosophy. (4) Same as Classics M145A. Lecture, three hours. Study of some major Greek and Roman philosophical texts, including those of pre-Socratics, Plato, Aristotle, and Hellenistic philosophers, with emphasis on historical and cultural setting of texts, their literary form, interrelations, and contribution to discussion of basic philosophical issues. P/NP or letter grading.

M103B. Later Ancient Greek Philosophy. (4) Same as Classics M145B. Lecture, three hours. Preparation: one course from 100A, 1010B, M102, or M103A. Study of some major Greek and Roman philosophical texts, including those of pre-Socratics, Plato, Aristotle, and Hellenistic philosophers, with emphasis on historical and cultural setting of texts, their literary form, interrelations, and contribution to discussion of basic philosophical issues. P/NP or letter grading.

104. Topics in Islamic Philosophy. (4) Lecture, three to four hours; discussion, one hour (when scheduled). Preparation: one philosophy course. Development of philosophy within orbit of Islam from beginning of interaction of Islam with ancient philosophy to period of hegemony of Ottoman Empire. Figures examined may vary but usually include many of al-Kindi, Ibn Sina (Avicenna), al-Ghazali, al-Shafii (Maimonides), Ibn Rushd (Averroes), and Suhrawardi. Topics include central issues in metaphysics and epistemology. May be repeated for credit with consent of instructor. P/NP or letter grading.


106. Later Medieval Philosophy. (4) Preparation: one philosophy course. Metaphysics, theory of knowledge, and theology of Aquinas, Duns Scotus, and Ockham, with selected reading of other authors from the 13th through early 15th century. Selected texts read in English translation.

107. Topics in Medieval Philosophy. (4) Lecture, four hours; discussion, one hour. Preparation: one philosophy course. Readings in one hour. Prerequisite: course 105 or 106. Study of philosophy and theology of one medieval philosopher such as Augustine, Anselm, Abelard, Aquinas, Scotus, or Ockham, or study of one theme area such as logic and knowledge in several medieval philosophers. Topic announced each term. May be repeated for credit with consent of instructor. P/NP or letter grading.
C108. Hobbes. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Hobbes’ political philosophy, especially Leviathan, with attention to its relevance to contemporary political philosophy. May be concurrently scheduled with course C253A. P/NP or letter grading.

C109. Descartes. (4) Lecture, four hours; discussion, one hour. Requisites: course 21 or two philosophy courses. Study of works of Descartes, with discussion of issues such as problem of skepticism, foundations of knowledge, existence of God, relation between mind and body, and connection between science and metaphysics. May be concurrently scheduled with course C209. P/NP or letter grading.

C110. Spinoza. (4) Lecture, three hours; discussion, one hour. Requisite: course 21. Study of philosophy of Spinoza. May be concurrently scheduled with course C210, in which case there is weekly discussion meeting, plus fewer readings and shorter papers for undergraduates. Limited to 30 students when concurrently scheduled.

C111. Leibniz. (4) Lecture, three hours; discussion, one hour. Requisite: course 21. Study of philosophy of Leibniz. May be concurrently scheduled with course C211, in which case there is weekly discussion meeting, plus fewer readings and shorter papers for undergraduates. Limited to 30 students when concurrently scheduled.

C112. Locke and Berkeley. (4) Lecture, four hours. Preparation: one philosophy course. Study of philosophies of Locke and Berkeley, with emphasis in some cases on one or the other. Limited to 30 students when concurrently scheduled with course C212. P/NP or letter grading.

C114. Hume. (4) Lecture, three hours; discussion, one hour. Requisite: course 21 or 22. Study of Kant’s views on related topics in theory of knowledge, ethics, and politics. May be repeated for credit with consent of instructor. Concurrently scheduled with course C214. P/NP or letter grading.

C115. Kant. (4) Lecture, three hours; discussion, one hour. Requisite: course 21 or 22. Study of Kant’s views on related topics in theory of knowledge, ethics, and politics. May be repeated for credit with consent of instructor. Concurrently scheduled with course C215. P/NP or letter grading.

C116. 19th-Century Philosophy. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Selected topics in 19th-century thought.

C117. Late 19th- and Early 20th-Century Philosophy. (4) Lecture, discussion, one hour. Preparation: one philosophy course. Selected topics in work of one or more of following philosophers: Boltzmann, Frege, Hussert, Meinong, G. Moore, early Russell, and Wittgenstein. May be repeated for credit with consent of instructor.

C118. Kierkegaard. (4) Preparation: one philosophy course. Philosophical study of some major works of Kierkegaard, with emphasis on interpretation of the texts.

C119. Topics in Modern Philosophy. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Selected topics in one or more philosophies of early modern period, or study in single area such as theory of knowledge or metaphysics in several philosophies. May be repeated for credit with consent of instructor. Concurrently scheduled with course C219. P/NP or letter grading.

Group II: Logic, Semantics, and Philosophy of Science

C124. Philosophy of Science: Historical. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Historical introduction to philosophy of science. Lecture on general topics discussed in context of actual episodes in development of natural sciences. May be repeated for credit with consent of instructor.

C125. Philosophy of Science: Contemporary. (4) Lecture, three hours; discussion, one hour. Requisite: course 31 or 124. Introduction to contemporary philosophy of science, focusing on problems of central importance. May be repeated for credit with consent of instructor.

C126. Philosophy of Science: Social Sciences. (4) Lecture, three hours; discussion, one hour. Preparation: two philosophy courses. Discussion of topics in philosophy of social sciences (e.g., methods of social sciences in relation to physical sciences, value-bias in social inquiry, concept formation, theory construction, explanation and prediction, nature of social laws).

C127A. Philosophy of Language. (4) Lecture, four hours; discussion, one hour. Enforced prerequisite: course 31. Syntax, semantics, pragmatics. Semantical concept of truth, sense and denotation, synonymy and antonymity, modalities and tenses, indirect discourse, indexical terms, semantic paradoxes. May be repeated for credit with consent of instructor. Concurrently scheduled with course C228A. P/NP or letter grading.

C127B. Philosophy of Language. (4) Lecture, four hours; discussion, one hour. Requisite: course 31. Course C127A is not requisite to course C127B. Selected topics similar to those considered in course C127A, but at a more advanced and technical level. May be repeated for credit with consent of instructor. Concurrently scheduled with course C228B. P/NP or letter grading.

C127C. Philosophy of Language. (4) Lecture, four hours; discussion, one hour. Recommended: course C127A or C127B. Selected topics similar to those considered in course C127B, but with focus on contemporary figures. May be repeated for credit with consent of instructor. Concurrently scheduled with course C228C. P/NP or letter grading.

C128. Topics in Philosophy of Mathematics. (4) Lecture, four hours. Requisites: courses 31, 132, and preferably one additional logic course. Study of selected topics in philosophy of mathematics. May include logicism of Frege and Russell, arithmetic reduced to logic; ramified type theory and impredicative definition (Russell, Poincare, early Weyl); intuitionism of Brouwer, Heyting, and early Weyl; proof theory of Hilbert. May be repeated for credit with consent of instructor. P/NP or letter grading.

C129. Philosophy of Psychology. (4) Lecture, three to four hours; discussion, one hour (when scheduled). Preparation: one 4-unit psychology course, one philosophy course. Selected philosophical issues arising from psychological theories. Nature of perception and issues about perceptual psychology and development of important types of representation (e.g., of body, cause, agency) in early childhood. Relevance of computer simulation to accounts of thinking and meaning; relations between semantical theory and learning theory; psychological aspects of theory of syntax. May be repeated for credit with consent of instructor. P/NP or letter grading.

C130. Philosophy of Space and Time. (4) Lecture, three hours; discussion, one hour. Preparation: two philosophy courses or one philosophy course and one physics course. Selected philosophical problems concerning nature of space and time. Philosophical implications of space-time theories, such as those of Newton and Einstein. Topics may include nature of geometry, conventionalism, absolutist versus relativist views of space and time, philosophical impact of relativity theory.

C131. Science and Metaphysics. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Preparation: two philosophy courses. Recommended: some background in mathematics and physics. Intensive study of one or two metaphysical topics on which results of modern science have been thought to bear. Topics may include nature of causation, reality and direction of time, time-travel, backwaters causation, realism, determinism, absolute view of space, etc. May be repeated for credit with consent of instructor. P/NP or letter grading.


C133. Topics in Logic and Semantics. (4) Lecture, four hours; discussion, one hour. Enforced requisite: course 31. Possible topics include formal theories, decision procedures, alternative theories of description, many-valued logics, deviant logics. May be repeated for credit with consent of instructor. P/NP or letter grading.

C134. Introduction to Set Theory. (4) (Same as Mathematics 1145.) Lecture, three hours; discussion, one hour. Requisite: course 135 or Mathematics 110A or 131A. Axiomatic set theory as framework for mathematical concepts; relations and functions, numbers, cardinality, axiom of choice, transfinite numbers. P/NP or letter grading.

C135. Introduction to Metalogic. (4) Lecture, four hours; discussion, one hour. Enforced requisite: course 31. Strongly recommended requisite: course 132 (or Mathematics 33A or 33B). Metatheory sentential logic and first-order logic. Introduction to formal language, formal deductive systems, and models. Compactness and completeness theorems that connect syntax and semantics of logical consequences. P/NP or letter grading.

C136. Modal Logic. (4) Lecture, four hours. Requisite: course 31. First course in two-term sequence (also see course 137). Topics include normal modal systems, derivability within the systems, Kripke-style semantics and generalizations, Lemmon/Scott completeness, incompleteness in tense and modal logic, quantificationist extensions. Letter grading.

C137. Philosophy of Biology. (4) (Formerly numbered 132.) Lecture, four hours. Preparation: one philosophy course. Intensive study of one or two current topics in philosophy of biology, which may include structure of evolutionary theory, fitness, taxonomy, reductionism, concept of biological species, and biological explanation. P/NP or letter grading.

Group III: Ethics and Value Theory

150. Society and Morals. (4) Lecture, three hours; discussion, one hour. Requisite: course 22. Critical study of principles and arguments advanced in discussion of current moral and social issues. Topics similar to those in course 151A. Each course may be repeated for credit with consent of instructor. P/NP or letter grading.

151A-C151B-151C. History of Ethics. (4-4-4) Lecture, three hours; discussion, one hour. Preparation: two philosophy courses. Each course may be taken independently for credit. P/NP or letter grading. 151A. Selected Classics in Ancient Ethical Theories: Plato, Aristotle. 151B. Modern. Intensive study of Kant’s ethical theory. May be repeated for credit with consent of instructor. May be concurrently scheduled with course C245; 151C. Selected Classics of Mediterranean Ethics.

153A. Topics in Ethical Theory: Normative Ethics. (4) Lecture, three hours; discussion, one hour. Requisite: course 22. Study of selected topics in normative ethical theory. Topics may include human rights, virtues and vices, principles of culpability and praise-worthiness (criteria of right action). May be repeated for credit with consent of instructor. P/NP or letter grading.

C153B. Topics in Ethical Theory: Metaethics. (4) Lecture, three hours; discussion, one hour. Requisite: course 22. Study and analysis of basic concepts, selected problems, and contemporary issues in metaethics. Topics may include analysis of moral language, justification of moral beliefs, moral realism, skepticism, free will, moral motivation, etc. May be repeated for credit with consent of instructor. May be concurrently scheduled with course C253B. P/NP or letter grading.
154. Topics in Value Theory: Rationality and Action. (4) Lecture, three hours; discussion, one hour. Requisite: course 6 or 7 or 22. Selected topics concerning normative issues in practical rationality or philosophy of action. Topics may include moral and practical judgments, roles of reasoning, rationality of morality and prudence, weakness of will, freedom of will, and decision theory. May be repeated for credit with consent of instructor. P/NP or letter grading.

154B. Topics in Value Theory: Moral Responsibility and Free Will. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Examination of philosophical issues raised by problems of medical ethics, such as abortion, euthanasia, and medical experimentation. May be repeated for credit with consent of instructor. P/NP or letter grading.

155. Medical Ethics. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Examination of philosophical issues raised by problems of medical ethics, such as abortion, euthanasia, and medical experimentation. May be repeated for credit with consent of instructor. P/NP or letter grading.

C156. Topics in Political Philosophy. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Examination of philosophical issues concerning normative questions in two-term sequence (also see course 136). Metaphysical foundations of modal logic and philosophical basis of model theory of modal logic. What are possible worlds? What is accessibility relation? Is modal logic one logic or one theory? Is its focus logical or metaphysical necessity? Are both notions really distinct? How metaphysically involved is (quantified) modal logic? What is its relationship to other modalities (e.g., first or second)? Aristotelian Essentialism? P/NP or letter grading.

177A. Existentialism. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Analysis of methods, problems, and views of some of the following: Kierkegaard, Nietzsche, Heidegger, Jaspers, Sartre, Marcel, and Camus. Possible topics include metaphysical foundations, nature of mind, freedom, problem of self, other people, ethics, existential psychoanalysis. May be repeated for credit with consent of instructor. P/NP or letter grading.

177B. Historical Studies in Existentialism. (4) Preparation: one philosophy course. Study of central philosophical texts of the following: Nietzsche, Heidegger, Sartre, Merleau-Ponty, Ricoeur. Topics include ontology, epistemology, and particularly philosophy of mind.

179. Asian Philosophy. (4) Lecture, three hours; discussion, one hour. Preparation: one or two relevant philosophy courses. Study of writings of one or two major Asian philosophers. May be repeated for credit with consent of instructor. P/NP or letter grading.

180. Philosophy of Action. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Preparation: two relevant philosophy courses. Examination of central metaphysical questions; nature of physical world, of minds, and of universals; and answers provided by alternative systems (e.g., phenomenology, materialism, dualism). P/NP or letter grading.


182. Elements of Metaphysics. (4) Lecture, three hours; discussion, one hour. Requisite: course 21. Study of basic metaphysical questions; nature of physical world, of minds, and of universals; and answers provided by alternative systems (e.g., phenomenology, materialism, dualism). P/NP or letter grading.

183. Theory of Knowledge. (4) Lecture, three hours; discussion, one hour. Requisite: course 21. Analysis of concept of empirical knowledge. May be repeated for credit with consent of instructor. P/NP or letter grading.

184. Topics in Metaphysics. (4) Lecture, three hours; discussion, one hour. Requisite: course 21. Intensive investigation of one of two topics or works in theory of knowledge, such as a priori knowledge, problem of induction, and epistemology as justified true belief. Topics announced each term. May be repeated for credit with consent of instructor. P/NP or letter grading.

185. Topics in Philosophy of Religion. (4) Lecture, three hours; discussion, one hour. Preparation: one or two relevant philosophy courses. Selected problems in philosophy of religion, such as attributes of God, arguments for or against existence of God, or relation between religion and ethics. Topics announced each term. May be repeated for credit with consent of instructor.

176. Metaphysics of Modality. (4) Lecture, four hours. Requisites: courses 31, 132. Highly recommended background in logic, modal logic, and two-term sequence (also see course 136). Metaphysical foundations of modal logic and philosophical basis of modal theory of modal logic. What are possible worlds? What is accessibility relation? Is modal logic one logic or one theory? Is its focus logical or metaphysical necessity? Are both notions really distinct? How metaphysically involved is (quantified) modal logic? What is its relationship to other modalities (e.g., first or second)? Aristotelian Essentialism? P/NP or letter grading.

187A. Historical Studies in Existentialism. (4) Preparation: one philosophy course. Study of central philosophical texts of the following: Nietzsche, Heidegger, Sartre, Merleau-Ponty, Ricoeur. Topics include ontology, epistemology, and particularly philosophy of mind.

187B. Historical Studies in Existentialism. (4) Preparation: one philosophy course. Study of central philosophical texts of the following: Nietzsche, Heidegger, Sartre, Merleau-Ponty, Ricoeur. Topics include ontology, epistemology, and particularly philosophy of mind.

189. Asian Philosophy. (4) Lecture, three hours; discussion, one hour. Preparation: one or two relevant philosophy courses. Study of writings of one or two major Asian philosophers. May be repeated for credit with consent of instructor. P/NP or letter grading.

189A-189B. Honors Research in Philosophy. (2-2) Tutorial, two hours. Limited to junior/senior philosophy honors program students. Each course to be taken in conjunction with one upper-division philosophy lecture course, either concurrently or in subsequent term, under direct supervision of lecture course instructor. Advanced work related to lecture course, further reading, and preparation of 15-page paper representing original research. Courses 189A and 189B must be taken in conjunction with two different lecture courses, and both must be taken to satisfy departmental honors requirement. May be repeated for credit. Individual contract required. Letter grading.

190. Directed Research in Philosophy. (2 to 4) Tutorial, three hours. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Culminating paper or research project required. Up to 8 units may be applied toward degree requirements, but no 199 course may be substituted for course in one of four groups on basis of similarity of subject matter. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200A-200B-200C. Seminar for First-Year Graduate Students. (4-4-4) Seminar, three hours. Limited to students accepted for first-year philosophy study. Selected topics in metaphysics and epistemology, history of philosophy, and ethics. S/U or letter grading.

Group I: History of Philosophy


203. Seminar: History of Ancient Philosophy. (4) Seminar, four hours. Selected problems and philosophers. May be repeated for credit with consent of instructor. S/U or letter grading.

206. Topics in Medieval Philosophy. (4) Lecture, four hours. Study of philosophy and theology of one or several medieval philosophers such as Augustine, Anselm, Abelard, Aquinas, Scotus, or Ockham or study of single area such as logic or theory of knowledge in several medieval philosophers. Topics announced each term. May be repeated for credit with consent of instructor. S/U or letter grading.

Special Studies

M187. Philosophical Analysis of Issues in Feminist Theory. (4) Same as Gender Studies M110C. Lecture, three hours. Restricted to Gender Studies majors: Gender Studies 10; for other students: one philosophy course. Examination in depth of different theoretical positions on gender and women as they have been applied to study of philosophy. Emphasis on theoretical contributions made by new scholarship on women in philosophy. Critical study of concepts and principles that arise in discussion of women’s rights to freedom and liberation. Philosophical approach to feminist theories. May be repeated for credit with consent of instructor. Letter grading.

191. Variable Topics Research Seminars: Philosophy. (4) Seminar, one hour; discussion, three hours. Variable topics; consult Schedule of Classes or “Department Announcements” for topic to be offered in specific term. Reading, discussion, and development of culminating project. May be repeated for credit with consent of instructor. Letter grading.

198C. Honors Research in Philosophy. (4) Tutorial, four hours. Limited to junior/senior philosophy honors program students. Development and completion of honors thesis or comprehensive research project under direct supervision of faculty member. May be repeated for credit. Individual contract required. Letter grading.

199. Directed Research in Philosophy. (2 to 4) Tutorial, three hours. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Culminating paper or research project required. Up to 8 units may be applied toward degree requirements, but no 199 course may be substituted for course in one of four groups on basis of similarity of subject matter. May be repeated for credit. Individual contract required. P/NP or letter grading.
207. Seminar: History of Medieval and Renaissance Philosophy. (4) Seminar, four hours. Selected problems and philosophers. May be repeated for credit with consent of instructor. S/U or letter grading.

C208. Hobbes. (4) Lecture, three hours; discussion, one hour. Recommended: one philosophy course. Hobbes' political philosophy, especially Leviathan, with attention to its relevance to contemporary political philosophy. May be concurrently scheduled with course C108. S/U or letter grading.

C209. Descartes. (4) Lecture, four hours; discussion, one hour. Study of works of Descartes, with discussion of issues such as problem of skepticism, foundations of knowledge, existence of God, relation between mind and body, and connection between science and metaphysics. May be concurrently scheduled with course C109. S/U or letter grading.

C210. Spinoza. (4) Lecture, three hours. Selected topics in philosophy of Spinoza. May be concurrently scheduled with course C110, in which case there is a two-hour biweekly discussion meeting, plus additional readings and longer term paper for graduate students. S/U or letter grading.

C211. Leibniz. (4) Lecture, three hours. Selected topics in philosophy of Leibniz. May be concurrently scheduled with course C111, in which case there is a two-hour biweekly discussion meeting, plus additional readings and longer term paper for graduate students. S/U or letter grading.

C212. Locke and Berkeley. (4) Lecture, four hours. Preparation: one philosophy course. Study of philosophies of Locke and Berkeley, with emphasis in some cases on one or the other. Limited to 30 students when concurrently scheduled with course C112. S/U or letter grading.

C214. Hume. (4) Lecture, three hours; discussion, one hour. Recommended: course 21 or 22. Study of Kant's views on related topics in theory of knowledge, ethics, and politics. May be repeated for credit with consent of instructor. Concurrently scheduled with course C114. S/U or letter grading.

C215. Kant. (4) Lecture, three hours; discussion, one hour. Recommended: course M134 or Mathematics M114S. Topics may include interpretations of probability, Bayesian and non-Bayesian confirmation theory, paradoxes of confirmation, coherence, and conditioning. S/U or letter grading.

C226. Topics in Mathematical Logic. (4) Lecture, four hours. Content varies from term to term. May be repeated for credit with consent of instructor. S/U or letter grading.

227. Philosophy of Social Science. (4) Lecture, four hours. Examination of philosophical problems concerning concepts and methods used in social sciences. Topics may include relation between social processes and individual psychology, logic of explanation in social sciences, determinism and spontaneity in history, interpretation of cultures radically different from one's own. Students with primary interest and advanced preparation in social sciences encouraged to enroll. May be repeated for credit with consent of instructor. S/U or letter grading.

C228A. Philosophy of Language. (4) Lecture, four hours; discussion, one hour. Enforced requisite: course 31. Syntax, semantics, pragmatics. Semantical concept of truth, sense and denotation, synonymy and analyticity, modalities and tenses, indirect discourse, indexical terms, semantical paradoxes. May be repeated for credit with consent of instructor. Concurrently scheduled with course C127A. S/U or letter grading.

C228B. Philosophy of Language. (4) Lecture, four hours; discussion, one hour. Recommended: course M228A or M228B. Selected topics similar to those considered in course C228A, but at more advanced and technical level. May be repeated for credit with consent of instructor. Concurrently scheduled with course C127B. S/U or letter grading.

C229. Philosophy of Science. (4) Lecture, four hours; discussion, one hour. Requisite: course 31. Course C228A is not requisite to C228B. Selected topics similar to those considered in course C228A, but with focus on contemporary figures. May be repeated for credit with consent of instructor. Concurrently scheduled with course C127C. S/U or letter grading.

C228C. Philosophy of Language. (4) Lecture, four hours; discussion, one hour. Requisite: course 31. Recommended: course C228A or C228B. Selected topics similar to those considered in course C228B, but with focus on contemporary figures. May be repeated for credit with consent of instructor. S/U or letter grading.

230. Seminar: Logic. (4) Seminar, four hours. May be repeated for credit with consent of instructor. S/U or letter grading.

231. Seminar: Intensional Logic. (4) Seminar, four hours. Topics may include logic of sense and denotation, modal logic, logic of demonstratives, epistemic logic, intensional logic of Principia Mathematica, possible worlds semantics. May be repeated for credit with consent of instructor. S/U or letter grading.

232. Philosophy of Science. (4) Seminar, three hours. Selected topics in philosophy of science. May be repeated for credit with consent of instructor. S/U or letter grading.

233. Seminar: Philosophy of Physics. (4) Seminar, four hours. May be repeated for credit with consent of instructor. S/U or letter grading.

Group III. Ethics and Value Theory

241. Topics in Political Philosophy. (4) Seminar, four hours. Requisite: course M211 or 157A or 157B or any two philosophy courses. Examination of one or more topics in political philosophy (e.g., justice, democracy, human rights, political obligation, alienation). May be repeated for credit with consent of instructor. S/U or letter grading.

244. Topics in Value Theory: Rationality and Action. (4) Seminar, three hours. Selected topics on normative issues in practical philosophy of action. Topics may include moral and practical dilemmas, nature of reasons for action, rationality of morality and prudence, weakness of will, freedom of will, and causal responses. May be repeated for credit with consent of instructor. S/U or letter grading.

245. History of Ethics: Modern. (4) Lecture, three hours; discussion, one hour. Intensive study of Kant's ethical theory. May be repeated for credit with consent of instructor. S/U or letter grading.

247. Topics in Political Philosophy. (4) Lecture, three hours; discussion, one hour. Analysis of some basic concepts in political theory. May be repeated for credit with consent of instructor. May be concurrently scheduled with course C151B. S/U or letter grading.

253B. Ethics: Theories of Justice. (4) Lecture, three hours; discussion, one hour. Requisite: course 22. Study and analysis of basic concepts, selected problems, and contemporary issues in metaethics. Topics may include analysis of moral language, justification of moral beliefs, moral realism, skepticism, free will, moral motivation, etc. May be repeated for credit with consent of instructor. May be concurrently scheduled with course C153B. S/U or letter grading.

254. Legal Theory Workshop. (1 to 8) Seminar, three hours. Students engage in small groups on philosophical issues in law of leading scholars from around country. Presentation of works in progress by visiting scholars every two weeks. Study by students of papers to be presented to gain background in relevant topics and to be prepared for speakers' presentations. Presentation of student papers to class for discussion. Substantial analytical paper required. S/U or letter grading.

254A-254B. Legal Theory Workshop. (254A) 3 or 4; (254B) 1 or 2) Formerly numbered M254A. Seminar, three hours. Course 254A is enforced requisite to 254B. Students engage in work on progress philosophical issues in law of leading scholars from around country. Presentation of works in progress by visiting scholars every two weeks. Study by students of papers to be presented to gain background in relevant topics and to be prepared for speakers' presentations. Presentation of student papers to class for discussion. Substantial analytical paper required. Concurrently scheduled with Law 555. In Progress (254A) and S/U or letter (254B).

255. Seminar: Aesthetic Theory. (4) Seminar, four hours. Selected topics. May be repeated for credit with consent of instructor. S/U or letter grading.

M256. Topics in Legal Philosophy. (4) (Same as Law M211) Lecture, three hours. Examination of topics such as concept of law, nature of justice, problems of punishments, legal reasoning, and obligation to obey the law. May be repeated for credit with consent of instructor.
M257. Philosophy Legal Theory. (1 to 6) (Same as Law M524.) Seminar, three hours. Topics in philosophy of law. May be repeated for credit with consent of instructor. S/U or letter grading.

M257A-257B. Philosophy Legal Theory. (1 to 8 each) (Same as Law M524.) Seminar, two hours. Course: M257A 257B. Seminar, three hours. Selected topics in philosophy of law. May be repeated for credit with consent of instructor. In Progress (M257A) and S/U or letter (257B) grading.

258. Contemporary Philosophy of Law. (4) Seminar, three hours. Limited to graduate students. Recent contributions to theoretical literature on contract law. Possible topics include purpose or function of contract law, relationship of contracts to promises, whether fault should play larger (or smaller) role in contract law, remedial approaches to breach including larger role for unjust enrichment, and contract law’s treatment of fraud and deception. Readings from legal and philosophical literature. S/U or letter grading.

259. Philosophical Research in Ethics and Value Theory. (2 to 4) Seminar, two hours. Preparation: completion of composition requirement. Preparation of ongoing research by graduate students. Participants make presentations, analyze and discuss presentations of others, and read and discuss philosophical texts related to presentations. Must be taken for units in quarters in which students present their own research. May be repeated for credit with consent of instructor. S/U grading.

Group IV. Metaphysics and Epistemology

271. Seminar: Topics in Metaphysics and Epistemology. (4) Seminar, three hours. May be repeated for credit with consent of instructor. S/U or letter grading.

275. Human Action. (4) Preparation: two upper-division philosophy courses. Examination of theories, concepts, and problems concerning human actions. Topics may include analysis of intentional actions; determination related to presentations. Must be taken for units in quarters in which students present their own research. May be repeated for credit with consent of instructor. S/U grading.

280. 20th-Century Continental Philosophy. (4) Seminar, three hours. Topics selected in 20th-century continental European philosophy. May be repeated for credit with consent of instructor. S/U or letter grading.

281. Seminar: Philosophy of Mind. (4) Seminar, three hours. May be repeated for credit with consent of instructor. S/U or letter grading.

282. Seminar: Metaphysics. (4) Seminar, three hours. May be repeated for credit with consent of instructor. S/U or letter grading.

283. Seminar: Theory of Knowledge. (4) Seminar, three hours. May be repeated for credit with consent of instructor. S/U or letter grading.

284. Seminar: Philosophy of Perception. (4) Seminar, three hours. May be repeated for credit with consent of instructor. S/U or letter grading.

285. Philosophy of Psychoanalysis. (4) Seminar, three hours. Examination of topics such as nature and validity of psychoanalytic explanations and interpretations, psychoanalysis and language, metapsychological concepts such as the unconscious, ego, id, super ego, defense mechanisms, and psychoanalytic conception of human nature. S/U or letter grading.

286. Philosophy of Psychology. (4) Seminar, four hours. Relevance of computer simulation to accounts of thinking and meaning; relations between semantic theory and learning theory; psychological aspects of theory of syntax; behaviorism, functionalism, and alternatives; physiology and psychology. S/U or letter grading.

287. Seminar: Philosophy of Language. (4) Seminar, three hours. May be repeated for credit with consent of instructor. S/U or letter grading.

288. Seminar: Wittgenstein. (4) Seminar, three hours. May be repeated for credit with consent of instructor. S/U or letter grading.

289. Seminar: Philosophy of Religion. (4) Seminar, four hours. May be repeated for credit with consent of instructor. S/U or letter grading.

290. Workshop: Philosophy of Language. (2 or 4) Seminar, two hours. Ongoing discussion of current issues in philosophy of language based on contemporary texts and current research. Presentations of ideas by attending faculty and graduate students with open discussion. May be repeated for credit with consent of instructor. S/U grading.

291. Workshop: Philosophy of Mathematics. (4) Seminar, three hours. Ongoing discussion of current issues in philosophy of mathematics based on contemporary texts and current research. Presentations of ideas by attending faculty and graduate students with open discussion. May be repeated for credit with consent of instructor. S/U grading.

299. Seminar: Philosophical Research. (4) Seminar, three hours. Preparation: advancement to candidacy. Presentation of ongoing research by graduate students or faculty members. Participants make presentations, analyze and discuss presentations of others, and read and discuss philosophical texts related to presentations. May be repeated for credit with consent of instructor. S/U grading.

Special Studies

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Teaching College Philosophy. (2 to 4) Seminar, to be arranged. Seminars, workshops, and apprentice teaching. Selected topics, including evaluation scales, various teaching strategies and their effects, and other topics in college teaching. May be repeated for credit. S/U grading.

501. Cooperative Program. (2 to 8) Preparation: consent of UCLA graduate adviser and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Directed Individual Studies. (2 to 12) Tutorial, to be arranged. Properly qualified graduate students who wish to pursue one problem through reading or advanced study may do so if their proposed project is acceptable to one staff member. May be repeated for credit. S/U or letter grading.

597. Directed Studies for Graduate Examinations. (2 to 8) Tutorial, to be arranged. Preparation for MA comprehensive examination or PhD oral qualifying examinations. S/U grading.

599. Research for PhD Dissertation. (2 to 12) Tutorial, to be arranged. Preparation: advancement to PhD candidacy. May be repeated for credit. S/U grading.

PHYSICS AND ASTRONOMY

College of Letters and Science

2-707 Physics and Astronomy Building

Los Angeles, CA 90095-1547

310-825-3440

http://www.pa.ucla.edu

Jean L. Turner, PhD, Chair

Troy A. Carter, PhD, Vice Chair, Resources

James E. Larkin, PhD, Vice Chair, Astronomy

Ian S. McLean, PhD, Vice Chair, Academic Affairs

Professors

Katsushi Arisaka, PhD

Zvi Bern, PhD

Dolores Bolovitch, PhD

Stuart E. Brown, PhD

Robin F. Bruinshma, PhD

Troy A. Carter, PhD

Sudip Chakravarty, PhD

Ferdinand V. Coronti, PhD

Robert D. Cousins, PhD

Eric D’Hoker, PhD

Sergio Ferrara, PhD

Christian Fronsdal, PhD

Steven R. Furlanetto, PhD

Walter N. Gekelman, PhD

Graciela B. Gelmini, PhD

Andrea M. Ghez, PhD (Lauren B. Leichtman and Arthur E. Levine Astrophysics Endowed Professor)

George Gruner, PhD

Michael Gutperle, PhD

Bradley M. Hansen, PhD

Jay Hauser, PhD

Koryol Holzer, PhD

Huan Z. Huang, PhD

Eric R. Hudson, PhD

Frank S. Jenko, PhD

David C. Jewitt, PhD

Hong-Wen Jiang, PhD

Per J. Kraus, PhD

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James E. Larkin, PhD

Alexander J. Levine, PhD

Matthew A. Malkan, PhD

Jean-Luc Margot, PhD

Thomas G. Mason, PhD

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Mayank R. Mehta, PhD

Jianwei Miao, PhD

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Wen-B. Mori, PhD

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Pietro Musumeci, PhD

William I. Newman, PhD

Christoph Niemann, PhD

Rene A. Ong, PhD

Seth J. Putterman, PhD

James Rosenzweig, PhD

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Alice E. Shapley, PhD

E.T. Tombolis, PhD

Tommaso L. Treu, PhD

Yaroslav Tserkovnyak, PhD

Jean L. Turner, PhD

Vladimir V. Vasiliev, PhD

Kang L. Wang, PhD

Gary A. Williams, PhD

Giovanni Zocchi, PhD

Professors Emeriti

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W. Gilber Clark, PhD

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Roberto Peccei, PhD

Claudio Pellegrini, PhD

William E. Slater, PhD

Reiner L. Stenzel, PhD

Roger K. Ulrich, PhD

Alfred Y. Wong, PhD

Chun Wa Wong, PhD

Edward L. Wright, PhD (David S.axon Presidential Professor Emeritus of Physics)

Benjamin M. Zuckerman, PhD

Associate Professors

Michael P. Fitzgerald, PhD

Brian C. Regan, PhD

Hilke E. Schlichting, PhD

Assistant Professors

Michaël Bachtis, PhD
Scope and Objectives

Since the time of the ancient Greeks, a natural affinity has existed between astronomy and physics, and the intellectual development of the two disciplines has often proceeded synergistically. Newton’s discovery of the laws of mechanics and universal gravitation not only explained motion on Earth, but brought the heavens and Earth into a single quantitative framework in which both are governed by the same laws. The revolutionary discoveries of twentieth-century physics—quantum mechanics and nuclear physics—were rapidly adopted by astronomers to interpret the spectroscopic observations of the stars and to construct accurate models of stellar structure. Einstein’s general theory of relativity predicted the expansion of the universe and that most awe-inspiring compaction of matter—the black hole.

Today astronomers study the accretion of matter onto supermassive black holes in quasars and search the most distant regions of the universe to learn about the exotic physical conditions that existed when the universe’s expansion was only fractions of a second old. By measuring the gravitational interactions on distance scales from galaxies to the vast superclusters of galaxies, astronomers have concluded that most of the universe’s matter is dark and nonluminous; physicists have speculated that this dark matter may consist of yet undiscovered exotic particles that are predicted by the most advanced theories of elementary particle physics.

Department of Physics and Astronomy faculty members and students are able to study the universe in the holistic manner that is demanded by the breadth of these two disciplines.

Undergraduate Study

The Department of Physics and Astronomy offers a choice of four undergraduate majors: the BS degree program in Astrophysics, the BS degree program in Biophysics, the BS degree program in Physics, and the BA degree program in Physics. Each course taken to fulfill any of the requirements for the majors must be taken for a letter grade.

Astronomy Courses

The department offers general courses to all University students, including those who are not science oriented.

Astronomy 3 is the fundamental one-term course for students who do not major in physical sciences and should be taken in the first or second year.

Astronomy 4, 5, and 6 develop the topics covered in course 3 to somewhat greater depths but are still aimed at nonscience majors.

Course 4 discusses stellar and supermassive black holes; course 5 concentrates on the problem of life in the universe; course 6 discusses the structure and evolution of the universe.

Astronomy 81 and 82 are general survey courses recommended for science majors in their second year. They systematically introduce astrophysics and require a good background in physics and mathematics (at least two terms of the Physics 1 series and two terms of the Mathematics 31 and 32 series).

Students of junior and senior standing in Physics or related sciences are invited to select any of these courses: Astronomy 115, 117, 127, 140, 180.

Physics Courses

Students who wish to use physics to satisfy part of the general education requirements in the physical sciences and who have no mathematics background beyond the high school mathematics required for admission to UCLA may take Physics 10.

Physics 1Q is intended for entering freshman Physics majors and other interested students.

Although it is not a required course or a part of or requisite to any general physics sequence of courses, its purpose is to indicate the nature of current research problems in physics on a level intended to be attractive to entering students with a good high school science and mathematics background.

Physics 1A, 1B, and 1C, or 1AH, 1BH, and 1CH form sequences of courses in general physics for majors in Physics.

The department takes into account prior preparation in physics. If students feel their background would permit acceleration, they may be exempted from one course in the 1A, 1B, 1C sequence by taking the final examination with a class at the end of any term. This serves as a placement examination. A satisfactory score on one or both parts of the College Board Advanced Placement Physics C Test may also serve as a placement examination, but placement is not automatic. Students should discuss such possibilities with their departmental adviser.

Physics 5A, 5B, 5C form a one-year sequence of courses in basic physics for students in the biological and health sciences.

Any two or more courses from Physics 1A, 1AH, and 5A, are limited to a total of 6 units of credit.

Astrophysics BS

Preparation for the Major

Required: Astronomy 81, 82; Physics 1A or 1AH, 1B or 1BH, 1C or 1CH, 4AL, 4BL, 17, 18L; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Program in Computing 10A or demonstrated ability to program. Systematic study of astrophysics should begin with Astronomy 81 and 82, taken in the second year. Recommended: Chemistry and Biochemistry 20A.

Transfer Students

Transfer applicants to the Astrophysics major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two astrophysics courses, two years of calculus, one and one half years of calculus-based physics with laboratory for majors, and one programming course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major


Honors Program

Senior majors in Astrophysics with a 3.5 grade-point average in all astronomy, mathematics, and physics courses are eligible for the honors program in astrophysics. In addition to completing all courses required for the major, students must complete two terms of Astronomy 199. To receive honors and highest honors at graduation, the grade-point average must remain at 3.5 and 3.75 or better, respectively, and work in course 199 must reflect original research and be accepted by the departmental honors committee.

Biophysics BS

The goal of the Biophysics major is to provide students with the undergraduate background to enable them to enter very good graduate programs in biophysics, molecular biology, and physics. As the molecular biophysics field emerges as an important and rapidly developing area of scientific research and knowledge, the major is designed to provide both the scientific/technical training and the immersion in physics and molecular biology necessary to enable students to understand and integrate these fields intellectually and to have the opportunity to become leaders in bringing the analytic and experimental techniques of both fields to bear on the complicated behavior of microbiological macromolecular systems.

Preparation for the Major

Required: Physics 1A or 1AH, 1B or 1BH, 1C or 1CH, 4AL, 4BL, 17; Chemistry and Biochemistry 20A, 20B, 30A, 30B; Life Sciences 7A, 7B, 7C; Mathematics 31A, 31B, 32A, 32B, 33A, 33B. Recommended: Physics 18L.

Transfer Students

Transfer applicants to the Biophysics major with 90 or more units must have completed the following introductory courses prior to admission to UCLA: two years of calculus, one and one half years of calculus-based physics with laboratory for majors, one year of general biology with laboratory for majors, and one year of general chemistry with laboratory for majors.
Preparation for the Major

Required: Physics 1A or 1AH, 1B or 1BH, 1C or 1CH, 4AL, 4BL, 17, 18L; Chemistry and Biochemistry 20A; Mathematics 31A, 31B, 32A, 32B, 33A, 33B. A detailed brochure on the major is available from the Undergraduate Office, 1-707A Physics and Astronomy Building.

Transfer Students

Transfer applicants to the Physics BS major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of calculus, one and one half years of calculus-based physics with laboratory for majors, and one general chemistry course for majors.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Physics 105A, 105B, 110A, 110B, 112, 115A, 115B, 115C, 131. The remainder of the course of study consists of a plan, to be thought out carefully, as the plan must be en- dorsed by the designated adviser and be approved by the departmental academic affairs committee. Preapproved plans of study are available from the undergraduate advisers. A C average is required in all courses taken to satisfy the major requirements.

Students preparing for graduate school should take additional courses in physics and mathematics. Physics 108, 114, 117, M122, 123, 124, 126, 132, 140A, and 140B are recommended.

Honors Programs

The department offers three honors programs leading to graduation with honors or highest honors in physics. Students are eligible after completing the preparation for the major and four upper-division physics courses with an overall grade-point average of 3.0 and a 3.5 GPA in upper-division physics and mathematics courses. Contact the Undergraduate Office for a complete description of the programs and an application.

Physiology BA

The Physics BA major is intended to provide students with a strong background in physics, yet allow students flexibility to study other fields as well. It should be of particular interest to students who want to double major or who want to teach science. Students who intend to continue work toward the PhD in Physics are advised to work for the BS in Physics as described earlier.

Preparation for the Major

Required: Physics 1A or 1AH, 1B or 1BH, 1C or 1CH, 4AL, 4BL, 17, 18L; Chemistry and Biochemistry 20A; Mathematics 31A, 31B, 32A, 32B, 33A, 33B. A detailed brochure on the major is available from the Undergraduate Office, 1-707A Physics and Astronomy Building.

Transfer Students

Transfer applicants to the Physics BA major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of calculus, one and one half years of calculus-based physics with laboratory for majors, and one general chemistry course for majors.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.
Upper-Division Courses


140. Stellar Systems and Cosmology. (4) Lecture, three hours; discussion, one hour. Designed for senior Astrophysics and Physics majors. Properties of star clusters and galaxies, with particular emphasis on Milky Way galaxy. Clusters and superclusters of galaxies. Extragalactic distance scale. Quasars and active galaxies. Topics in cosmology, including expansion of universe, microwave background, galaxy formation from primordial fluctuations, and observational constraints on cosmological parameters. P/NP or letter grading.

180. Astrophysics Laboratory. (4) Lecture, two hours; laboratory, four hours. Designed for juniors/seniors in Astrophysics, Physics, or related field. Lectures cover statistical methods in astrophysics, one- and two-dimensional processes, and numerical methods. Laboratory experiments involve radio astronomy, interferometry, narrowband solar imaging, and visual photometry. Emphasis on use of computers for automatic collection of data and processing two-dimensional astronomical images. P/NP or letter grading.

190. Research Colloquia in Astrophysics. (2) Seminar, two hours per week per unit. Limited to one or more faculty members to discuss their own work or related work in discipline. Led by one supervising faculty member. May be repeated for credit. P/NP grading.

194. Research Group Seminars: Astrophysics. (1) Research group meeting, one hour. Designed for undergraduate students who are part of research group/ laboratory. May be repeated for credit. Mahoney and physical and astrophysical faculty members or students with regard to understanding methodology in field and/or laboratory equipment. May be repeated for credit. P/NP grading.

196. Research Apprenticeship in Astrophysics. (2 to 4) Tutorial, three hours per week per unit. Limited to juniors/seniors with overall 3.0 grade-point average. Entry-level research apprenticeship for upper-division students under guidance of faculty mentor. May be repeated for credit. Individual contract required. P/NP grading.

197. Individual Studies in Astronomy. (2 to 4) Tutorial, four hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

198. Honors Research in Astrophysics. (2 to 4) Tutorial, 12 hours. Limited to juniors/seniors with minimum overall 3.0 grade-point average. Development and completion of honors thesis or comprehensive research project under direct supervision of faculty member. May be repeated for credit. Individual contract required. Letter grading.

199. Directed Research or Senior Project in Astronomy. (2 to 4) Tutorial, two hours. Limited to junior/senior Astrophysics and Physics majors. Super- vised individual research or investigation under guidance of faculty mentor. Culuminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

270. Astrophysical Dynamics. (4) Lecture, three hours; discussion, two hours. Designed for graduate students in Astrophysics. Overview of astrophysical phenomena, including accretion and absorption of radiation by matter, spectroscopy, spectral lines, and radiative transfer. Hydrodynamics and shock waves. Applications to stars, to interstellar and intergalactic medium, and to the universe. P/NP or letter grading.


277A-277B. Astronomy Research Project. (5-6) Tutorial, to be arranged. Designed for second-year graduate astronomy students. Two-term research project planned in conjunction with faculty adviser on any suitable research topic in astronomy or astrophysics, culminating in written report at end of second term. S/U (277A) and letter (277B) grading.

278. Special Topics in Astronomy. (2 or 4) Seminar, to be arranged. Informal colloquium with lectures on current research by faculty, postdoctoral fellows, and graduate students on topics of current interest in astrophysics. May be repeated for credit. S/U grading.

279. Seminar: Current Astronomical Research. (2 Seminar, one hour. Astronomy and astrophysics colloquium with lectures on current research by local and visiting researchers. S/U grading.

281. Quantum Mechanics for Astrophysics. (4) Lecture, four hours. Designed for departmental graduate students. Quantum mechanical topics in areas of interest for astrophysics applications. Hydrogen atom, radiative transitions, complex atoms, molecular spectroscopy including electronic, vibrational, and rotational transition, nuclear reaction theory. Letter grading.


283. Numerical and Statistical Methods in Astrophysics. (4) Lecture, three hours. Topics selected by instructor in numerical, mathematical, and statistical methods of relevance to modern astrophysical research. Topics include Fourier transforms, filtering, and power spectra, numerical algorithms, N-body codes, maximum likelihood, Bayesian inference, and error estimation. Letter grading.

284. Order of Magnitude Astrophysics. (4) Lecture, three hours. Principles and real-time problem solving covering all fields of astrophysics. Topics selected by instructor. Students work together and individually to solve problems on blackboard using basic physics and order of magnitude estimations. Letter grading.

M285. Origin and Evolution of Solar System. (4) (Same as Earth, Planetary, and Space Sciences M285.) Lecture, four hours. Dynamical problems of solar system; chemical evidences from geochemistry, meteorites, and solar atmosphere; nucleosynthesis; solar origin, evolution, and termination; solar nebula, hydromagnetic processes, formation of planets and solar system. Content varies from year to year. May be repeated for credit. S/U grading.


287. Research Tutorial: Astrophysics. (2 or 4) (Same as Physics M287.) Tutorial, one hour; discussion, two hours. Required of each graduate student doing research in this field. Seminar and discussion by faculty, postdoctoral fellows, and graduate students on topics of current interest in astrophysics. May be repeated for credit. S/U grading.

289. Research Tutorial: Exoplanets. (2 or 4) Tutorial, three hours per week per unit. Limited to four graduate students. Seminar and discussion by faculty, postdoctoral fellows, and graduate students on topics of current interest in astrophysics. May be repeated for credit. S/U grading.

297. Research Tutorial: Astro particle Physics. (2 or 4) Seminar, to be arranged. Designed for research assistants employed as teaching assistant, associate, or fellow. Teaching assistantship under active guidance and supervision of regular faculty member responsibility for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

Physics

Lower-Division Courses

1A. Physics for Scientists and Engineers: Mechanics (Honors). (5) Lecture/demonstration, four hours; discussion, one hour. Required preparation: high school physics, one year of high school calculus or Mathematics 31A and 31B. Enforced requisites: Mathematics 31A, 31B. Enforced corequisite: Mathematics 32B. Motion, Newton laws, work, energy, and angular momentum, rotation, equilibrium, gravitation. P/NP or letter grading.


1B. Physics for Scientists and Engineers: Oscillations, Waves, Electric and Magnetic Fields. (5) Lecture/demonstration, four hours; discussion, one hour. Enforced requisites: course 1A, 1B, Mathematics 31B, 32A. Enforced corequisite: Mathematics 32B. Recommended corequisite: Mathematics 33A. Enriched preparation for upper-division physics courses. Same material as course 1A but in greater depth; recommended for Physics majors and other students desiring such coverage. P/NP or letter grading.

18L. Modern Physics Laboratory. (4) Lecture, three hours; discussion, one hour; laboratory, two hours. Enforced requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH). Mathematics 32A, 32B. Enforced corequisite: Mathematics 33A. Photons, photoelectric effect, uncertainty principle, wave-particle duality, Schrödinger equation, hydrogen atom, Gaussian and Poisson distributions, temperature, entropy, Maxwell/Boltzmann distribution, kinetic theory of gases, laws of thermodynamics, black body radiation. P/NP or letter grading.

98A. Workshop: Numerical Computational Physics. (1) Laboratory, one hour. Introductory presentation on three most common mathematical software packages—Mathematics, Matlab, and MATLAB. After some familiarization with most common software functions, development of student personal preferences and assessment of advantages and strong points of each by solving problems in computational physics. P/NP grading.

98A. PEERS Collaborative Learning Workshops for Life Sciences Majors. (1) Laboratory, three hours. Corequisite: associated undergraduate lecture course in physics for life sciences majors. Limited to Program for Excellence in Education and Research in Science (PEERS) students. Development of problem-solving skills and intuition in collaborative learning environment. May be repeated three times, but only 1 unit may be applied toward graduation. P/NP grading.

98B. PEERS Collaborative Learning Workshops for Physical Sciences Majors. (1) Laboratory, three hours. Corequisite: associated undergraduate lecture course in physics for physical sciences and engineering majors. Limited to Program for Excellence in Education and Research in Science (PEERS) students. Development of problem-solving set of dilemmas. Revolutions of relativity and quantum mechanics that have led to a much deeper understanding of structure and evolution of our Universe. Specific topics include special and general relativity, cosmology (Big Bang), quantization of light, nuclear reactions, and radiative processes. Electromagnetic, and quantum mechanics. P/NP or letter grading.

12. Physics of Sustainable Energy. (4) Lecture, three hours; discussion, one hour. Special mathematical preparation beyond that necessary for admission to UCLA in freshman standing not required. Discussion of physics underpinnings of energy sources and consumption, with emphasis on renewables. Global view of energy balance and consideration of role of physical processes. Ways in which energy is used in everyday life (transportation, heating, cooling), and ways in which it is produced, covering all common and speculative sources of energy from fossil fuels to solar, wind, nuclear, and fusion. Fundamental physical limitations of each technology to master concepts such as efficiency of thermodynamic cycles and of chemical and nuclear reactions. Quantitative estimation of amount of energy students use in their daily lives and what physical processes could produce it. P/NP or letter grading.

11. Revolutions in Physics. (4) Lecture, three hours; discussion, one hour. Survey of modern physics history and development of important physical ideas placed in cultural and historical perspective. P/NP or letter grading.

598L. Advanced Study and Research at Lick Observatory. (4 to 12) Tutorial, to be arranged. Open to graduate students who require observational experience, as well as those working on observational problems for their thesis. May be repeated at discretion of department. S/U grading.

599. PhD Research and Writing. (10 to 12) Tutorial, to be arranged. May be repeated at discretion of department. S/U grading.

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skills and intuition in collaborative learning environment. May be repeated three times, but only 1 unit may be applied toward graduation. P/NP grading.

Upper-Division Courses

105A. Analytic Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH). Mathematics 32B, 33A. Corequisite: Mathematics 33B. Newtonian mechanics and conservation laws, gravitational potentials, calculus of variations, Lagrangian and Hamiltonian mechanics, central force motion, linear and nonlinear oscillations. P/NP or letter grading.

105B. Analytic Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH). Mathematics 32B, 33A. Corequisite: Mathematics 33B. Newtonian mechanics and conservation laws, gravitational potentials, calculus of variations, Lagrangian and Hamiltonian mechanics, central force motion, linear and nonlinear oscillations. P/NP or letter grading.

108. Optical Physics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH). 131, Mathematics 32B, 33A, 33B. Physical optics and magneto-optical effects. Additional topics of fundamental or current interest. P/NP or letter grading.


110B. Electricity and Magnetism. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH). 110A, Mathematics 32B, 33A, 33B. Partition functions and physical systems of hydrodynamics and elasticity. Applications in ultrasonics, low-temperature physics, solid-state physics, aarchitectural acoustics. P/NP or letter grading.


116. Electronics. (4) Lecture, three hours; laboratory, three hours. Alternating current circuits, transmission line circuits, transistor and IC circuits to generate, modify, and detect electrical signals, introduction to digital circuits, analysis of noise and methods to reduce its influence on circuit performance. P/NP or letter grading.

117. Electronics for Physics Measurement. (4) Lecture, three hours; laboratory, two hours. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH). Physics 33A, 33B, 33C. Corequisite: course 131, Experimental course to develop understanding of design principles in modern electronics for physics measurements. Brod introduction to analog and digital electronics, the physical properties of semiconductors, transistors and integrated circuits, and measurement of the effects of various devices and circuits. P/NP or letter grading.

118. Electronics for Physical Measurements. (4) Lecture, three hours; laboratory, four hours. Requisites: courses 1A, 1B, 1C, 117, Mathematics 32A, 32B, 33A. Provides students with opportunity to apply basic knowledge of circuit design for purpose of building stand-alone circuits with function related to control or measurement. Examples of physics-oriented projects include radio-frequency detection and measurement of mechanical resonances of bar, FM transmitter, spectra of radio-frequency pulsed ultrasound, sun-following pointers, cosmic ray detector. P/NP or letter grading.

M122. Introduction to Plasma Electronics. (4) (Same as Electrical Engineering M122.) Lecture, three hours; discussion, one hour. Requisites: courses 110A and 111E. Senior-level introductory course on electronics of ionized gases and applications to materials processing, generation of coherent radiation and particle beams, and renewable energy sources. Letter grading.


124. Nuclear Physics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH). Mathematics 32B, 33A, 33B. Corequisite: course 115C. Nuclear properties, nuclear forces, nuclear stability, nuclear decays, and nuclear reactions. P/NP or letter grading.


180A. Nuclear Physics Laboratory. (4) Laboratory, four hours. P/NP or letter grading.
180C. Solid-State Laboratory. (4) Laboratory, four hours. P/NP or letter grading.

180D. Acoustics Laboratory. (4) Laboratory, four hours. P/NP or letter grading.

180E. Plasma Physics Laboratory. (4) Laboratory, four hours. P/NP or letter grading.

180F. Elementary Particle Laboratory. (4) Laboratory, four hours. P/NP or letter grading.

M180G. Soft Matter Laboratory. (4) (Same as Chemistry M142D.) Laboratory, four hours. P/NP or letter grading.

180N. Computational Physics and Astronomy Laboratory. (4) (Formerly numbered 188.) Lecture, one hour; laboratory, six hours. Requisites: courses 105A, 110A, 110B, 112 (or Astronomy 115), 115A, 115B. Prior experience in working with computers helpful but not required. Designed to give first-hand experience in solving physics and astronomy problems on computers. Project-based course, with projects selected from core areas of classical mechanics, electrodynamics, quantum physics, statistical physics, and astronomy. Introduction to problems and techniques in physics and related literature. Students will develop computer programs in modern programming language of their choice (Python recommended) and carry out numerical experiments with it, with results documented in report, written in P/NP or letter grading.

180G. Quantum Optics Laboratory. (4) Lecture, two hours; laboratory, six hours. Requisite or corequisite: course 115C. Limited to junior/senior Astrophysics and Physics majors. Use of techniques of quantum optics, laser spectroscopy, and concepts of quantum mechanics, including superposition, quantum measurement, hidden variable theories, and Bell’s inequality. Examination and use of modern optics, including lasers, polarization, manipulation, and photon counting. Letter grading.


C186. Neuropysics: Brain-Mind Problem. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 2A, 3A, 110A, 110B, 112A, 113A, 113B, 33A, 33H. How does mind emerge from brain? Provides summary of basic biophysics of neurons, synapses, and plasticity. Introduction to commonly used experimental techniques of measuring, quantifying, and modeling neural activity, and their relative strengths and weakness and use of them to understand link between neural circuits, their emergent neural dynamics, and behavior in example models. Discussion of mechanisms of interaction between neural circuits and their role in cognition, learning, and sleep. Computer laboratory component where students learn to write simple codes to quantify neural activity patterns. Concurrently scheduled with course CM286. P/NP or letter grading.


188L. Special Laboratory Courses in Physics. (4) Lecture, one hour; laboratory, two hours. Limited to junior/senior departmental majors. Departmentally sponsored special topics courses such as pilot courses or those taught by visiting faculty members. May be repeated for credit. P/NP or letter grading.

188A. Physics of Energy. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, 1C, 17, Mathematics 31A, 31B, 32A, 32B, 33A. Describing of underlying physics of energy. Energy systems are based on well-known undergraduate-level physics, including mechanics, electromagnetism, and thermodynamics. Some understanding of fluid mechanics, quantum physics, statistical mechanics, nuclear physics also helpful, but those concepts introduced as needed. Understanding energy is of primary importance to our world today, as we face serious challenges to finding adequate energy sources to meet world demand, and as energy production is often accompanied by undesirable environmental and social side-effects. P/NP or letter grading.


123B. Advanced Atomic Structure. (4) N+ symbols, continuous groups, fractional parentage coefficients, n electron systems.


215C. Quantum Statistical Mechanics and the Many Body Problem. (4) Lecture, three hours. Classical methods for interacting systems; quantum field theory techniques in statistical mechanics; Green’s function approach; Coulomb gas; imperfect Bose gas; electron/phonon interaction; superconductivity; phase transitions; theory of Fermi liquid. S/U or letter grading.

M215D. Nonequilibrium Statistical Mechanics and Molecular Biology. (4) (Same as Chemistry M223C.) Lecture, three hours. Requisites: course 215A, or Chemistry C215B and C223B. Fundamen-
434. Advanced Plasma Laboratory. (4) Lecture, three hours. Designed for graduate students. Basic principles of charged-particle accelerators, including principles of synchrotrons and storage rings, beam parameter determination, statistical behavior of beams and beam cooling techniques, synchrotron light sources, colliding beam storage rings, medical accelerators, and free electron lasers.


266. Seminar: Propagation of Waves in Fluids. (2 to 4) Seminar, three hours. S/U or letter grading.

268. Seminar: Spectroscopy. (2 to 4) Seminar, three hours. S/U or letter grading.

269A. Seminar: Nuclear Physics. (2 to 4) Seminar, three hours. S/U or letter grading.

269B. Seminar: Elementary Particle Physics. (2 to 4) Seminar, three hours. S/U or letter grading.

269C. Seminar: Accelerator Physics. (2 to 4) Seminar, three hours. Physics principles governing design and performance analysis of particle accelerators, using existing accelerators as examples and emphasizing interplay among design goals, component performance, and operational experience. S/U grading.


C287A. Biological Physics I: Life at Rest. (4) Lecture, three hours. Basic principles of biophysics of neurons. Commonly used experimental and theoretical techniques of measuring, quantifying, and modeling neural activity, and their relative strengths and weaknesses and use of them to understand link between neural circuitry and emergent level behavior. Introduction to computational models. Use of them to understand link between neural circuitry and emergent level behavior. Introduction to computational models. Use of them to understand link between neural circuitry and emergent level behavior. Introduction to computational models. Use of them to understand link between neural circuitry and emergent level behavior.
299. Research Tutorial: Nuclear Physics. (2 or 4) Required of each graduate student doing research in this field, ordinarily during second or third year. Seminar and discussion on nuclear physics by staff and students, in both experiment and theory. May be repeated for credit. S/U grading.

M370A. Integrated Science Instruction Methods. (4) (Same as Chemistry M370A and Earth, Planetary, and Space Sciences M370A.) Lecture, two hours; discussion, two hours; laboratory, one hour. Preparation: one introductory lower-division year (including laboratory) each of chemistry, life sciences, and physics and at least two Earth science courses, preferably one with field experience. Classroom management, lesson design, assessment, history of science education. S/U or letter grading.

M370B. Integrated Science Instruction Methods. (4) (Same as Chemistry M370B and Earth, Planetary, and Space Sciences M370B.) Lecture, two hours; discussion, one hour; laboratory, one hour. Requisite: course M370A or Chemistry M370A or Earth, Planetary, and Space Sciences M370A. Application of learning theory to science instruction and classroom management, including use of technology, collaborative learning, laboratory safety, ethical issues, field experiences, and professional development. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

490. Scientific Writing. (2) Seminar, 90 minutes. Practical guidelines for improved scientific writing oral presentation. Writing of several short papers with subsequent analysis in class. Short blackboard and/or viewgraph presentations. Topics vary. S/U grading.

495. Teaching College Physics. (2) Seminar, two hours; multi-day intensive training at beginning of Fall Quarter. Required of all new teaching assistants. Special course for teaching assistants designed as an introduction to teaching college physics, with emphasis on applying discussed techniques in classroom. Ideas and skills learned are evaluated in the sections of each teaching assistant. May be repeated for credit. S/U grading.

596. Directed Individual Studies. (2 to 12) Tutorial, to be arranged. May be repeated for credit. S/U grading.

597. Preparation for Master's Comprehensive Examination or PhD Qualifying Examinations. (4) Tutorial, to be arranged. May be repeated twice for credit. S/U grading.

598. Master's Thesis Research and Writing. (4 to 12) Tutorial, to be arranged. May be repeated twice for credit. S/U or letter grading.

599. PhD Research and Writing. (4 to 12) Tutorial, to be arranged. May be repeated for maximum of 18 units. S/U grading.

**Physics and Biology in Medicine**

Interdepartmental Program

David Geffen School of Medicine

B2-115 Center for Health Sciences Box 951721

Los Angeles, CA 90095-1721

310-825-7811

pbm@mednet.ucla.edu

http://pbm.ucla.edu

Michael McNitt-Gray, PhD, Chair

Magnus Dahlbom, PhD, Graduate Adviser

**Faculty Committee**

Magnus Dahlbom, PhD (Molecular and Medical Pharmacology)

Dieter R. Enzmann, MD (Radiological Sciences)

Michael McNitt-Gray, PhD (Radiological Sciences)

Michael E. Phelps, PhD (Biophotonics, Molecular and Medical Pharmacology)

Michael L. Steinberg, MD (Radiation Oncology)

**Scope and Objectives**

The Physics and Biology in Medicine MS/PhD Program is a CAMPEP-accredited interdepartmental graduate program supported by the Departments of Molecular and Medical Pharmacology, Radiation Oncology, and Radiological Sciences. It offers training in four specialties: medical imaging, molecular and cellular oncology, molecular imaging, and therapeutic medical physics. Specialized facilities for training and research are available in the departmental laboratories, as well as in the Crump Institute for Molecular Imaging, Center for Medical Countermeasures against Radiation, and Center for Computer Vision and Imaging Biomarkers, among others. Highly specialized equipment includes state-of-the-art medical imaging modalities such as MRI, CT angiography, and PET/CT in both clinical and preclinical settings, as well as advanced radiotherapy treatment and planning facilities. The program prepares students for careers as independent researchers or professional medical physicists, and graduates pursue academic, industrial, governmental, and clinical careers, regardless of which specialty they pursue.

Graduates in physics and biology in medicine can expect to engage in any combination of research, teaching, clinical service, and consultation. Biomedical physicists are usually employed in hospitals frequently associated with a medical school, where they are members of the academic staff. They are also in demand in high-technology private industry engaging in research and development of diagnostic equipment. In government agencies, biomedical physicists are involved in the formulation and enforcement of regulations applied to the use of radiation in health care delivery.

**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

**Graduate Degrees**

The Physics and Biology in Medicine Program offers Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Physics and Biology in Medicine.
Physics and Biology in Medicine

Upper-Division Course

199. Directed Research in Biomedical Physics. (2 to 4) (Formerly numbered Biomedical Physics 199.) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Online quality, background required. May be repeated for credit. Individual contract required. N/P or letter grading.

Graduate Courses

200A. Physics and Chemistry of Nuclear Medicine. (4) (Formerly numbered Biomedical Physics 200A.) Lecture, three hours; discussion, one hour. Requisite: course 200B. Introduction to nuclear medicine instrumentation, including well ionization chambers, probe and well scintillation detectors, scintillation cameras, and single photon and positron emission computed tomography. S/U or letter grading.

200B. Nuclear Medicine Instrumentation. (4) (Formerly numbered Biomedical Physics 200B.) Lecture, one hour; laboratory, three hours. Requisite: course 200A. Introduces medicine instrumentation, including well ionization chambers, probe and well scintillation detectors, scintillation cameras, and single photon and positron emission computed tomography. S/U or letter grading.

202A. Introduction to Nuclear Medicine. (4) (Formerly numbered Biomedical Physics 202A.) Lecture, four hours. Requisite: course 205. Hands-on experience performing acceptance testing and quality control checks of imaging equipment such as fluoroscopy, digital subtraction angiography, mammography, ultrasound, magnetic resonance imaging, computed tomography, and computed radiography. S/U or letter grading.

202B. Nuclear Medicine Laboratory: Medical Imaging. (4) (Formerly numbered Biomedical Physics 202B.) Discussion, two hours; laboratory, four hours. Requisite: course 205. Hands-on experience calibrating treatment planning and radiation therapy equipment. S/U or letter grading.

209. Signal and Image Processing for Biomedicine. (4) (Formerly numbered Biomedical Physics 209.) Lecture, three hours; discussion, one hour. Requisite: course 205. Introduction to advanced techniques in rapid imaging, quantitative autoradiography for estimating brain and heart blood flow, and analysis techniques applied to medical images. Discrete and continuous-time signal processing, vector spaces, projection theorem, and least-squares approximations. Discussion of signal and image processing, correlation and independence, principal component analysis, and independent component analysis. Basic ideas in inverse problems and optimization. Application in medical and signal processing. Introduction to human anatomy, cell biology, and physiology as visualized through microscopy, molecular imaging, radiography, CT, MRI, ultrasonography, PET, and SPECT. Letter grading.

210. Computer Vision in Medical Imaging. (4) (Formerly numbered Biomedical Physics 210.) Lecture, three hours; discussion, one hour. Recommended requisites: Mathematics 155, Program in Computing 10A. Study of image segmentation, feature extraction, object recognition, classification, and visualization with biomedical applications. Includes region-growing, edge detection, mathematical morphology, clustering, neural networks, and volume rendering in lectures, case studies, and programming projects. S/U or letter grading.

211. Medical Ultrasound. (4) (Formerly numbered Biomedical Physics 211.) Lecture, 90 minutes; laboratory, two hours. Preparation: one calculus course. Production of real-time ultrasound images, transducer modeling and design, Doppler and color flow instrumentation, biohazards of ultrasound, ultrasound phantom design, and ultrasound tissue characterization techniques. Laboratory included. S/U or letter grading.

212. Biochemical Basis of Positron-Emission Tomography (PET). (4) (Formerly numbered Biomedical Physics 212.) Lecture, three hours; discussion, one hour. Introduction to biochemical basis and application of radiotopes to study metabolism noninvasively by positron-emission tomography (PET). Validation of kinetic models to derive quantitative information from PET. Introduction to clinical and experimental application of PET. S/U or letter grading.

213. Quantitative Autoradiography. (4) (Formerly numbered Biomedical Physics 213.) Lecture, three hours; discussion, one hour. Application of quantitative autoradiography for estimating brain and heart functions. Topics include 2-deoxyglucose method for metabolic rate, iodoantipyrine method for blood flow, amino acid method for protein synthesis; quantitative receptor autoradiography; neuroanatomy and neurophysiology of autoradiogram and PET scan interpretation. S/U or letter grading.

214. Medical Image Processing Systems. (4) (Formerly numbered Biomedical Physics 214.) Lecture, three hours; discussion, one hour. Recommended requisites: courses 209, 210. Advanced image processing and image analysis techniques applied to medical images. Discussion of approaches to computer-aided diagnosis and image quantitation, as well as applications of pattern classification techniques (neural networks and discriminant analysis). Examination of problems from several imaging modalities (CT, MR, CR, and mammography). S/U or letter grading.

215. Breast Imaging Physics andInstrumentation. (4) (Formerly numbered Biomedical Physics 215.) Lecture, three hours; laboratory, two hours. Requisite: course 205. Special requirements of mammography, design of dedicated mammography X-ray units from generators and tubes through screen/film cassettes. Stereotactic biopsy units, cost/benefit controversy of screening mammography, digital mammography, computer-aided diagnosis, telemammography, breast MRI, and breast ultrasound. S/U or letter grading.


217. Statistics and Data Analysis in Biomedical Physics. (2) (Formerly numbered Biomedical Physics 217.) Lecture; two hours; laboratory, one hour. Requisites: Mathematics 31A, 31B, 32A, 32B, 33A, 33B. Introduction to computer-based statistical concepts, data analysis, and experimental design within biomedical physics research. Standard statistical packages and various statistical computing algorithms on relevant data sets within radiological sciences. Letter grading.

218. Radiologic Functional Anatomy. (2) (Formerly numbered Biomedical Physics 218.) Lecture, two hours. Introduction to human anatomy, cell biology, and physiology as visualized through microscopy, molecular imaging, radiography, CT, MRI, ultrasonography, PET, and SPECT. Letter grading.

219. Principles and Applications of Magnetic Resonance Imaging. (4) (Formerly numbered Biomedical Physics 219.) Lecture, three hours; discussion, one hour. Basic principles of magnetic resonance (MR), physics, and image formation. Emphasis on hard- and software equations, and image contrast mechanisms, spin and gradient echoes, Fourier transform imaging methods, structure of pulse sequences, and various scanning parameters. Introduction to advanced techniques in rapid imaging, quantitative imaging, and spectroscopy. Letter grading.

220A-220D. Laboratory Rotations in Biomedical Physics. (2-2) (Formerly numbered Biomedical Physics 220A-220D.) Laboratory, two hours. Laboratory projects to provide students with introduction to field. One oral and one written presentation required. S/U grading.


221. Applied Health Physics. (4) (Formerly numbered Biomedical Physics 221.) Lecture, three hours; discussion, one hour. Requisite: course 216. Basics of radiation safety as applied to medical applications. Introduction to all regulatory issues pertaining to medical uses of radioactivity. Letter grading.

222. Advances in Medical Magnetic Resonance: Clinical MR Spectroscopy and Fast MRI Techniques. (Formerly numbered Biomedical Physics 222.) Lecture, three hours; laboratory, one hour. Requisite: course 219. Basic principles of NMR spectroscopy, localized spectroscopic sequences on whole-body environment, single voxel water/fat suppression, chemical shift imaging sequences, processing with multidimensional Fourier
Physics / 575

Scope and Objectives

Physiology is the science of the functional activities of the human body. This covers a wide range, including observations on humans and experiments on animals and model systems in order to understand principles. Physiology is the science most directly relevant to human medicine in all its specialties and to understanding all environmental factors affecting human life. It is also a pure science of great challenge because of the complexity of its problems and its extensive interaction with mathematical, physical, biochemical, and engineering sciences, as well as with other branches of biology.

Within the prescribed curriculum, students may specialize in cellular and molecular physiology, theoretical and mathematical physiology, and organ systems and integrative phenomena, including neuroscience and behavioral physiology.

The Department of Physiology offers post-doctoral training in research and welcomes students interested in articulated MD/PhD programs.

Applicants interested in pursuing graduate study may apply directly to the interdepartmental Molecular, Cellular, and Integrative Physiology Ph.D. program.

Physiology

Upper-Division Courses

100. Elements of Human Physiology, (6) Lecture. Required for first-year dental students. Major organic body functions. With special supplementation, suit-

transfers gradient/spin-echo based echo-planar imaging, diffusion/perfusion imaging techniques. Letter grading.

223. Seminar: Radiation Biology, (4) (Formerly numbered Biomedical Physics 223.) Seminar, four hours. Exploration of physiologic and molecular mechanisms that influence on normal and malignant tissues to ionizing radiation, with particular emphasis on critical and high in-depth analysis of approaches through which such responses can be modified in therapeutic setting of radiation therapy. Integration biological information into process of treatment planning and delivery. S/U grading.

225. Contrast Mechanisms and Quantification in Magnetic Resonance Imaging, (4) (Formerly numbered Biomedical Physics 225.) Lecture, four hours. Requisite: course M219. Introduction to magnetic resonance contrast mechanisms and quantification techniques in magnetic resonance imaging. Topics include exogenous and endogenous contrast mechanisms, measuring tissue perfusion and permeability, advanced diffusion and q-space analysis, chemical exchange and magnetization transfer imaging, and relaxometry. Letter grading.

227. Human Disease: Current and Future Role of Biophysical Principles, (4) (Formerly numbered Biomedical Physics 227.) Lecture, three hours; discussion, one hour. Emphasis on current and future roles of biophysical principles in diagnosis and treatment of human disease, with focus on interdisciplinary nature of this field. Exploration of two diseases in depth with detailed description of disease onset, progression, and therapeutic influence. Introduction to magnetic resonance imaging (MRI) technique. Basic tools and understanding of recent MRI developments that have had high impact on field, involve novel pulse sequence design or image reconstructions, and enable imaging of anatomy or function in way that surpasses what is currently possible with any modality. Topics include, in-depth sequence simulation, RF pulse design, rapid image acquisition, parallel imaging, compressed sensing, image reconstruction and processing, motion encoding and compensation, chemical shift and understanding of artifacts. Programming exercises in Matlab to provide hands-on experience. Letter grading.

M230. Computed Tomography: Theory and Applications, (4) (Formerly numbered Biomedical Physics M230.) (Same as Biomechanics M230.) Lecture, four hours. Computed tomography is a three-dimensional imaging technique widely used in radiology and is becoming active research area in biomedicine. Basic principles of computed tomography (CT), various reconstruction algorithms, special characteristics of CT, physics in CT, and various biomedical applications. Letter grading.

231. Advanced Treatment Planning in Radiation Therapy, (3) Lecture, four hours. Enforced requisites: courses 203, 216. Designed to provide theoretical and practical understanding of treatment planning techniques utilized in radiation therapy. Topics include clinical treatment planning workflow, general planning principles and strategies, and specific considerations for various treatment delivery modalities and advanced treatment techniques. Detailed discussion on dose calculation algorithms and inversing planning and optimization. Clinical treatment planning demonstration using commercial treatment planning systems to reinforce theoretical understanding of clinical applications and implementation. S/U or letter grading.

M248. Introduction to Biological Imaging, (4) (Formerly Biomedical Physics M248.) (Same as Bioengineering M248 and Pharmacology M248.) Lecture, three hours; laboratory, one hour; outside study, seven hours. Exploration of role of biological imaging in modern biology and medicine, including imaging physics, instrumentation, image processing, and applications of imaging for range of modalities. Practical experience provided through series of imaging laboratories. Letter grading.


269. Seminar: Medical Imaging, (1) (Formerly numbered Biomedical Physics 269.) Seminar, one hour. Continuous registration required of students in medical imaging specialty. Topics of current interest in medical imaging, with lectures from department, other universities, and private industry. S/U or letter grading.

M285. Functional Neuroimaging: Techniques and Applications, (3) (Formerly numbered Biomedical Physics M285.) (Same as Biomedical Engineering M284, Neuroscience M285, Psychiatry M285, and Psychology M278.) Lecture, three hours. In-depth examination of functional imaging, including MRI and electrophysiological methods, data acquisition and analysis, experimental design, and results obtained thus far in human systems. Strong focus on understanding technologies, how to design activation imaging paradigms, and how to interpret results. Laboratory visits and design and implementation of functional MRI experiment. S/U or letter grading.

286. Image Registration Techniques, (4) (Formerly numbered Biomedical Physics 286.) Lecture, four hours. Preparation: strong mathematical background. Examination of state-of-art image registration methods that exist today. Mathematical descriptions of each of different classes of registration methods and two-dimensional/three-dimensional/four-dimensional implementation details. Programming of registration methods in Matlab/C/C++/CUDA/JAVA interfaces so students learn all registration methods currently investigated. Letter grading.

M424. Functional Magnetic Resonance Imaging Journal Club, (2) (Formerly numbered Biomedical Physics M424.) (Same as Psychiatry M424.) Discussion, 90 minutes. Limited to 10 students. Current topics in functional neuroimaging, with emphasis on novel applications, analysis, and acquisition methods. Presentation and critique of student papers. Overall emphasis on magnetic resonance imaging. Example areas include tractography through diffusion tensor imaging, jittered event-related experimental designs, parallel receive MRI imaging, integrated electrophysiological and imaging of intracranial grafting.

495. Special Studies in Biomedical Physics, (4) (Formerly numbered Biomedical Physics 495.) Seminar, two hours; laboratory, four hours. Teaching assistance in graduate laboratory courses under supervision of faculty member. S/U grading.

596. Research in Biomedical Physics, (4 to 12) (Formerly numbered Biomedical Physics 596.) Tutorial, to be arranged. Directed individual study or research. Only one course may be applied toward MS degree requirements. May be repeated. S/U grading.

597. Preparation for PhD Qualifying Examinations, (4) (Formerly numbered Biomedical Physics 597.) Tutorial, to be arranged. Preparation; successful completion of screening examinations. Research for and preparation of PhD dissertation. May be repeated. S/U grading.

PHYSIOLOGICAL SCIENCE

See Integrative Biology and Physiology

PHYSIOLOGY

David Geffen School of Medicine

53-231 Center for Health Sciences

Box 951751

Los Angeles, CA 90095-1751

310-825-5882
dmoorehead@mednet.ucla.edu

http://www.physiology.ucla.edu

Stephen C. Cannon, MD, PhD, Chair

Bailij S. Khakh, PhD, Executive Vice Chair

Nancy L. Wayne, PhD, Vice Chair, Instruction
able introduction to field for graduate students for whom 201A, 201B course sequence was too extensive, P/NP or letter grading.

199. Directed Research in Physiology. (2 to 4) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

M210. Molecular and Cellular Mechanisms of Neural Integration. (6) (Same as Neuroscience M230 and Physiological Science M210.) Lecture, four hours; discussion, one hour. Requisite: Neuroscience M202. Introduction to mechanisms of synaptic processing. Selected problems of current interest, including regulation and modulation of transmitter release, molecular biology and physiology of receptors, cellular basis of integration in sensory perception and learning, neural nets and oscillators, and molecular events in development and sexual differentiation. Letter grading.

220. Methods in Cell Physiology. (6) Linear circuit analysis, including admittance, transfer admittance, transfer function, and filters using transform methods. Application of these concepts to electronic analog circuits in lectures and laboratory, with emphasis on operational amplifiers. Applications to electrophysiology include microelectrode amplifiers, voltage clamp and patch clamp techniques, with circuit analysis and noise considerations. Digital electronics cover logic gates, sequential circuits, and A/D and D/A conversion, with introduction to sampling theory.

221. Cell Physiology: Excitability. (6) Requisite: course 220. In-depth coverage of general properties of excitable cells, linear cable properties, nonlinear conductance changes, and generation and propagation of the nerve impulse. Voltage gating and gating currents, as well as relationship between macroscopic conductance and single channel properties discussed in analytical detail using original publications.

298. Current Topics in Physiology. (2 to 4) Lecture, one hour; discussion, one hour. Designed for graduate students. Students read primary literature in a specified area and conduct or participate in discussions on these papers. May be repeated for credit. S/U or letter grading.

596. Directed Individual Study or Research. (2 to 12) Tutorial, to be arranged. S/U grading.

597. Preparation for MS Comprehensive Examination or PhD Qualifying Examinations. (2 to 12) Tutorial, to be arranged. S/U grading.


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POLITICAL SCIENCE
College of Letters and Science

4289 Bunche Hall
Box 951472
Los Angeles, CA 90095-1472
310-825-4331
http://www.polisci.ucla.edu

Barbara Geddes, PhD, Chair

Professors

Richard D. Anderson, Jr, PhD
Matthew A. Barreto, PhD
Kathleen Bawn, PhD
Michael S.Y. Chee, PhD
Joshua F. Dienstag, PhD
Barbara Geddes, PhD
Miriam A. Golden, PhD
Deborah W. Larson, PhD
Jeffrey B. Lewis, PhD

Michael F. Lofchie, PhD
Susanne Lohmann, PhD
Kirstie M. McClure, PhD
Barry O’Neill, PhD
Karen J. Orren, PhD
Anthony R. Pagden, PhD
Mark A. Peterson, PhD
Daniel N. Posner, PhD (Colemman Professor of International Development Studies)
Raymond A. Rocco, PhD
Ronald L. Rogowski, PhD
Michael L. Ross, PhD
Thomas Schwartz, PhD
David O. Sears, PhD
Giulia Sissa, PhD
Steven L. Spiegel, PhD
Arthur A. Stein, PhD
James W. Tong, PhD
Daniel S. Treisman, PhD
Lynn Vavreck Lewis, PhD
David O. Wilkinson, PhD
John R. Zaller, PhD

Professors Emeriti

Joel D. Aberbach, PhD
James D. DeNardo, PhD
Leonard Freedman, PhD
Robert S. Gerstein, PhD
Edward Gonzalez, PhD
Edmond Keller, PhD
Roman Kolkowicz, PhD
Carole Pateman, DPhil
David C. Rapoport, PhD
Richard N. Rosecrance, PhD
Richard L. Sklar, PhD
Marc Trachtenberg, PhD
David A. Wilson, PhD
Charles E. Young, PhD

Associate Professors

Lorrie A. Frasure-Yokley, PhD
Scott C. James, PhD
Leslie N. Johs, PhD
Davide Panagia, PhD
Michael F. Thies, PhD
Robert F. Trager, PhD
Brian D. Walker, PhD

Assistant Professors

Graeme D. Blair, PhD
Erin K. Hartman, PhD
Chad J. Hazlett, PhD
Margaret E. Peters, PhD
Christopher N. Tausanovitch, PhD

Adjunct Assistant Professor

James A. Desveaux, PhD

Scope and Objectives

The undergraduate major in the Department of Political Science aims to provide students with understanding of basic political processes and institutions as these operate in different national and cultural contexts. It also covers the interaction between nation states, the character of the relations between citizens and governments, and the values and criteria by which the quality of political life is judged. The program may be individually focused to serve the needs of the liberal arts major, the student seeking preparation for graduate work in political science, public administration, law, and other professional fields, and the student preparing for specialized roles in political and public organizations.

The graduate program leads to the PhD degree in Political Science (a master’s degree may be earned in the process of completing PhD requirements). It is designed to give students a strong foundation in the discipline while enabling them to acquire additional skills for advancing their professional careers.

Undergraduate Study

Political Science BA

Political Science Premajor

All students intending to major in Political Science must enroll as Political Science premajors. After completion of preparation for the major courses, they need to petition to enter the major in the Undergraduate Office, 4269 Bunche Hall.

Preparation for the Major

Required: Four lower-division courses from Political Science 10, 20, 30, 40, 50. Students must also take Political Science 6 or 6R. Statistics 10 or 12 may be substituted for course 6 or 6R.

Students must complete all premajor courses with a 2.0 grade-point average by the time they attain 135 units. Admission to the major is granted only after successful completion of all lower-division requirements.

Transfer Students

Transfer applicants to the Political Science major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one statistics course and four courses from political theory, world politics, game theory, American politics, or comparative politics.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Ten upper-division courses (40 units) selected from Political Science 101S through 199S, each taken for a letter grade. Students are required to maintain a 2.0 overall grade-point average in all upper-division political science courses.

Upper-division political science courses are organized into six fields: (I) political theory, (II) international relations, (III) American politics, (IV) comparative politics, (V) methods and models, and (VI) race and ethnic politics.

In fulfilling the requirement of 10 upper-division political science courses, students must satisfy the following:

1. A concentration in one field consisting of at least three upper-division courses in that field
2. A distribution requirement of at least one upper-division course in each of three different fields outside the field of concentration; multifield courses from the concentration field may not satisfy a distribution field
3. Four additional political science courses to comprise the total of 10

Courses 191H, 195CE, 198, and 199 may not be applied toward either the concentration or distribution requirement.

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Honors Program
The department honors program is open to seniors and to students who (1) have completed five upper-division political science courses (two of which are in one field), (2) have a 3.5 grade-point average in upper-division political science courses, and (3) are eligible for College of Letters and Science honors. Students should have substantial experience in writing research papers before they enter the honors program or course 191H.

Students wishing to qualify for graduation with departmental honors must complete courses 191H and 198, in which a senior thesis is written. Successful completion of the honors program is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Political Science offers Master of Arts (MA), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Political Science.

Political Science

Lower-Division Courses

6. Introduction to Data Analysis. (5) Lecture, three or four hours; discussion, one hour (when scheduled). Not open for credit to students with credit for course 6R. Introduction to collection and analysis of political data, with emphasis on application of statistical reasoning to study of relationships among political variables. Use of computer as aid in analyzing data from various fields of political science, among them comparative politics, international relations, American politics, and public administration. P/NP or letter grading.

6R. Introduction to Data Analysis—Research Version. (5) Lecture, three or four hours; discussion, one hour (when scheduled). Enforced corequisite: course 50R. Not open for credit to students with credit for course 6R. Introduction to collection and analysis of political data, with emphasis on application of statistical reasoning to study of relationships among political variables. Use of computer as aid in analyzing data from comparative politics, P/NP or letter grading.

10. Introduction to Political Theory. (5) Lecture, three hours; discussion, one hour. Exposition and analysis of selected political theorists and concepts from Plato to the present. P/NP or letter grading.

20. World Politics. (5) Lecture, three hours; discussion, one hour. Required of all students concentrating in Field II. Introduction to problems of world politics. P/NP or letter grading.

30. Politics and Strategy. (5) Lecture, three or four hours; discussion, one hour (when scheduled). Introduction to study of strategic interaction in political applications. Use of game theory and other formal modeling strategies to understand politics. P/NP or letter grading.

40. Introduction to American Politics. (5) Lecture, three hours; discussion, one hour. Basic institutions and processes of democratic politics. Treatment of themes such as constitutionalism, representation, participation, and leadership coupled with particular emphasis on the American case. P/NP or letter grading.

50. Introduction to Comparative Politics. (5) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 50R. Comparative study of constitutional principles, governmental institutions, and political processes in selected countries. P/NP or letter grading.

50R. Introduction to Comparative Politics—Research Version. (5) Lecture, three or four hours; discussion, one hour (when scheduled). Enforced corequisite: course 6R. Not open for credit to students with credit for course 50. Comparative study of constitutional principles, governmental institutions, and political processes in selected countries, with emphasis on presentation and evaluation of quantitative evidence. P/NP or letter grading.

60. Ethics and Governance. (5) Lecture, three or four hours; discussion, one hour (when scheduled). To study question of can’t we all just get along, students play games of cooperation, coordination, collaboration, and competition and examine whether and how diversity, disagreement, and democracy influence game play, to understand under what conditions diversity feeds productively or counterproductively into group effort. Development of self- and other-awareness of emotions involved in disagreement to appreciate how different kinds of social organization promote or undercut social cognition and collective action. Such understanding needs to develop bottom-up through and interactive learning, active and analytical learning, systems thinking, and real-world application. P/NP or letter grading.

Upper-Division Courses

M105. Economic Models of Public Choice. (4) (Same as Economics M135.) Lecture, three or four hours; discussion, one hour (when scheduled). Preparing: is it possible that American political thinkers from Puritanism to the present to solve differences; emergence and spread of democracy; can’t we all just get along? Study of diversity, disagreement, and democracy: Diversity covers individual differences, cultural differences, and human difference; multiculturalism, and identity politics; multiculturalism and one-world ethics. Disagreement includes moral, ideological, and party-political disagreement; resolvable and irresolvable kinds of conflict; conflict and group polarization; herding and information cascades. Democracy stands for political mechanisms of information aggregation; political mechanisms to resolve differences, or to keep peace among people with irresolvable differences; emergence and spread of democracy, liberty, and rule of law. Lecture.

M115A. Ancient and Medieval Political Theory. (4) (Same as Classics M121.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for seniors. Analysis of methods and consequences of arriving at collective decisions through political mechanisms. Topics include free-rider problem, voting and majority choice, demand revelation, and political bargaining. P/NP or letter grading.

M115B. Early Modern Political Theory. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for seniors. Exposition and critical analysis of major thinkers such as Machiavelli, More, Montaigne, Hobbes, Locke, Rousseau, Smith, Condorcet, and Kant and questions such as representation, property, autonomy, and political legitimacy. P/NP or letter grading.

M115C. Citizenship and Public Service. (4) (Same as Civic Engagement M115.) Lecture, three or four hours; discussion, one hour (when scheduled). Recommended requisite: course 10. Designed for seniors. Study of ways in which political thinkers have conceived of ideas of citizenship and public service, how these ideas have changed over time, and frameworks for thinking about citizenship in era of markets and globalization. P/NP or letter grading.

M114A. American Political Thought I, 1620 to 1865. (5) (Same as numbered 114.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for seniors. Exposition and critical analysis of American political thinkers from Puritanism to the present. Designed for juniors/seniors. Study and interpretation of theorists who have focused their analyses on social and political problems of 20th century. P/NP or letter grading.

M114B. American Political Thought II, 1865 to Present. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Course 114A is not requisite to 114B. Designed for juniors/seniors. Exposition and critical analysis of American political thinkers from Reconstruction to present. P/NP or letter grading.

M115C. Citizenship and Public Service. (4) (Same as Civic Engagement M115.) Lecture, three or four hours; discussion, one hour (when scheduled). Recommended requisite: course 10. Designed for seniors. Study of ways in which political thinkers have conceived of ideas of citizenship and public service, how these ideas have changed over time, and frameworks for thinking about citizenship in era of markets and globalization. P/NP or letter grading.

115D. Diversity, Disagreement, and Democracy: Can’t We All Just Get Along? (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for seniors. Can’t we all just get along? Study of diversity, disagreement, and democracy: Diversity covers individual differences, cultural differences, and human difference; multiculturalism, and identity politics; multiculturalism and one-world ethics. Disagreement includes moral, ideological, and party-political disagreement; resolvable and irresolvable kinds of conflict; conflict and group polarization; herding and information cascades. Democracy stands for political mechanisms of information aggregation; political mechanisms to resolve differences, or to keep peace among people with irresolvable differences; emergence and spread of democracy, liberty, and rule of law. Lecture.

115E. Humanist Practice and Civic Culture. (4) Seminar, three hours. Enforced requisite: courses 10, 115M, 115C. Designed for juniors/seniors. Exploration of connection between humanist practices (philosophy, sociability, science, republican self-fashioning) and promotion of civic ethical culture that can promote flourishing civil society. How has humanism informed our Western understanding of republican and civic responsibility? What aspects of our humanist heritage maintain relevance for world that many describe as posthumanist? What form of civic culture is most appropriate for North American citizens in 21st century? P/NP or letter grading.

116A. Marxism. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Critical analysis of origins, nature, and development of Marxist political theory. P/NP or letter grading.

116B. Continental Political Thought. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of im-
117. Jurisprudence. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Development of law and legal systems; consideration of fundamental legal concepts; contributions and influence of modern schools of legal philosophy in relation to law and government. Letter grading.


119. Special Studies in Political Theory. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Preparation: one course in Field I. Requisite: course 10. Designed for juniors/seniors. Intensive examination of one or more special problems appropriate to political theory. Sections offered on regular basis, with topics announced in preceding term. May be repeated for credit with topic change. P/NP or letter grading.

M119A. Modern Receptions of Ancient Political Thought. (4) (Same as Classics M124.) Lecture, three hours. Designed for juniors/seniors. Study of how Western culture has conceived and reinterpreted political thought of ancient Greeks and Romans. Topics include examination of influential case(s) of modern reception of classical antiquity. P/NP or letter grading.

Field II: International Relations

120A. Foreign Relations of U.S. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of factors and forces entering into formation and implementation of American foreign policy, with special emphasis on contemporary problems. P/NP or letter grading.

120B. World Politics and U.S. Foreign Policy after September 11. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Video lectures by leading scholars as well as live lectures and discussion on complex problems such as terrorism, nuclear proliferation, and Arab-Israeli conflict. P/NP or letter grading.

121A. Studies in Formulation of American Foreign Policy. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of formation of American foreign policy with respect to individual cases. Consult Schedule of Classes for topics to be offered in specific term. P/NP or letter grading.

122A. World Order. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 20. Designed for juniors/seniors. Study of problems of international system seen as community capable of cooperation and development. P/NP or letter grading.

M122B. Global Environment and World Politics. (4) (Same as Environment M122B.) Lecture, three or four hours; discussion, one hour (when scheduled). Recommended requisite: course 20. Politics and policy of major global environmental issues such as climate change, integrating law, policy, and political science perspectives. P/NP or letter grading.

123A. International Law. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 20. Designed for juniors/seniors. Study of nature and place of international law in conduct of international relations. P/NP or letter grading.

123B. International Organizations. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Overview of both theory and functioning of international organizations in promoting international cooperation. Required readings include both statistical and formal models. P/NP or letter grading.

124A. International Political Economy. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 20. Designed for juniors/seniors. Study of political aspects of international economic issues. P/NP or letter grading.

124C. Political Economy of Environment Development. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Interaction of international and domestic factors in political evolution of Latin America. P/NP or letter grading.

125A. Arms Control and International Security. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Arms control and international security in nuclear age. Nuclear arms race; relationship between deterrence doctrines and nuclear war; roles of technology and ideology; nuclear proliferation; outer space. P/NP or letter grading.

126. Peace and War. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 20. Designed for juniors/seniors. Theory and research on causes of war and conditions of peace.

127A. International Relations of Western Europe. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. External relations of United Kingdom, West Germany, France, Italy, and other European members of NATO, in regard to European security in context of Atlantic Alliance. P/NP or letter grading.


128B. International Relations of Post-Communist Russia. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisites: courses 20, 128A. Designed for juniors/seniors. Study of foreign policy of post-Communist Russia, with special emphasis on its relations with NATO, the former communist states of East Central Europe, China, and the Commonwealth of Independent States.


130A. International Relations of Post-Communist Poland. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.

130B. International Relations of Post-Communist Hungary. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.

131. Energy and International Relations. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.

132A. International Relations of Japan. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.

132B. International Relations of China. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Relations of China with its neighbors and other powers, with emphasis on contemporary interests and policies of China vis-à-vis U.S. P/NP or letter grading.

137A. International Relations Theory. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of various theoretical approaches to international relations. P/NP or letter grading.

138A. International Politics, 1815 to 1914. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Classic period of European great power politics, beginning with peace settlement at Vienna and ending with coming of World War I. P/NP or letter grading.

138B. International Politics, 1914 to the Present. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.

Field III: American Politics

140A-140B-140C. National Institutions. (4-4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. P/NP or letter grading.

140A. Congress. Study of those factors which affect character of the legislative process and capacity of representative institutions to govern in contemporary society. 140B. The Presidency. Study of nature and problems of presidential leadership, emphasizing impact of the bureaucracy, congress, public opinion, interest groups, and party system on the presidency and national policy-making. 140C. Supreme Court. Interaction of constitutional development and role of Supreme Court as interpreter of the U.S. Constitution. Reading of Supreme Court cases as well as various historical and contemporary commentaries.

M141A-141E. Electoral Politics. (4 each) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.

M141A. Political Psychology. (4) (Same as Psychology M138.) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Study of nature and problems of political behavior, including game-theoretic analysis, Downs spatial model of elections, valence characteristics in elections, campaign finance, endogeneity problems in social sciences, liberal bias in media, industrial organi-
142A. Political Parties and Interest Groups, (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Examination of political parties and activities of political parties in the U.S. Attention to historical development of the parties, nature of party change, campaign functions and electoral role of the parties, membership problems, political parties, legislation and policy formulation practices. P/NP or letter grading.

M142D. Understanding Public Issue Life Cycle. (4) (Same as Public Policy M127.) Lecture, three or four hours; discussion, one hour (when scheduled). Recommended preparation: courses 10, 40, and one course from Economics 1, 2, 5, 11, or 101. Examination of public issue life cycle is shaped by (1) economic and political incentives of various actors—business, news media, mass public, organized interests, Congress, the president, regulatory agencies, and courts (2) ideology, cognitive biases, and ethical reasoning. P/NP or letter grading.


143B. Metropolitan Governance, (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of how political, social, economic, and cultural factors influence metropolitan governance in both U.S. central cities and suburban areas. Study of some major issues in metropolitan governance through classic and contemporary readings on political power, political economy of cities, and racial/ethnic segregation, as well as political incorporation and racial/ethnic coexistence. P/NP or letter grading.

144C. Politics of American Suburbanization, (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of political, social, and economic evolution of American suburbs, particularly in post-WWII era. Dominant themes focus primarily on historical patterns and implications of U.S. racial/ethnic inclusion and exclusion; housing, taxes; immigrant and ethnic minority suburbanization; suburban sprawl and uneven growth; suburban decline; and regionalism. P/NP or letter grading.

145A-145E. Public Law and Judicial Process, (4-4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of complex process of policy development and implementation in U.S., including roles of federal, state, and local agencies as well as private organizations. Subsections offered on regular basis, with topics announced in preceding term. P/NP or letter grading.

146A. National Policy Development and Implementation, (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Investigation of complex process of policy development and implementation in U.S., including roles of federal, state, and local agencies as well as private organizations. Subsections offered on regular basis, with topics announced in preceding term. P/NP or letter grading.

147A-147B(405,629),(552,710). American Political Development, (4-4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Introduction to historical development of American politics and ideas and institutions that drive durable change over time. Examination of theories, concepts, and analytical tools at center of developmental inquiry. P/NP or letter grading.

147B. Period Inquiry, (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Examination of one period in American political history. Critical features fostering stability and change. Discussion of contributions to structure and content of contemporary American politics. Possible periods, Founding, Reconstruction, Progressive Era, New Deal, and Cold War. Consult Schedule of Classes for topics to be offered in specific term. P/NP or letter grading.

147C. Institutional Development, (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Examination of one American political institution and its development, interaction of American politics and some aspect of culture and society. Assessment of broader political environment of politics, isolating points of contact, conflict, and pressure for change. Possible topics include party development, constitution, business regulation, and politics and religion. Sections offered on regular basis, with topics announced in preceding term. P/NP or letter grading.

149. Special Topics in American Government and Politics, (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40, two of courses in Field 144A-144D. Intensive examination of one or more special problems appropriate to American politics. Sections offered on regular basis, with topics announced in preceding term. May be repeated for credit with topic change. P/NP or letter grading.

Field IV: Comparative Politics

150. Political Violence, (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of one or several different uses of violence in revolutionary processes; demonstrations, mass uprisings, coup d'état, assassination, and terrorism. P/NP or letter grading.

151A-151B-151C. African Politics, (4-4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Letter grading.

151A. Government and Politics of Africa, (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Comparative study of government and politics in contemporary Africa, with special attention to political and economic development; interaction of politics and economic development, political institutions, and conflict and conflict resolution. Letter grading.

151B. Political Economy of Africa, (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of interrelations of economic and political factors in African development, with special attention to political basis of inappropriate economic policy during early post-independence period and change toward a more appropriate economic strategy in recent times. Letter grading.

151C. Special Topics in African Politics, (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Consult Schedule of Classes for topics to be offered in a specific term. Letter grading.

153A. Comparative Government and Politics of Western Europe: West European Government and Politics, (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 50. Designed for juniors/seniors. Comparative study of constitutional and political structure of Western European states, with particular attention to contemporary problems. P/NP or letter grading.

154A-154B. Government and Politics in Latin America, (4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Comparative study of governmental and political development, organization, and practices. P/NP or letter grading. 154A. States of Middle America. Enforced requisite: course 50 or 50R. 154B. States of South America.

155A. Government and Politics of Post-Communist States of Russia, (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Intensive study of institutions and political development in Russia, with special attention to legacy of Soviet Union and post-Soviet state. P/NP or letter grading.

157. Government and Politics in the Middle East, (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Comparative study of government in the Arab States, Turkey, Israel, and Iran. P/NP or letter grading.

158. Southeast Asian Politics, (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 50. Designed for juniors/seniors. Survey of political environment in major Southeast Asian states. Use of case studies to address major problems confronting region, including democratization, economic growth, drug trade, deforestation, and security threats. Letter grading.
159A-159B. Government and Politics of China. (4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors: 159A. Chinese Revolution and Age of Mao Zedong. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Survey of modern Chinese politics from decline of Manchu dynasty and rise of revolutionary nationalism to death of Mao Zedong, with emphasis on socioeconomic foundations and political dynamics of revolution in modern China. 159B. China in Age of Reform. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of China's political and institutional development in post-Mao era. Assessment of impact of changing socioeconomic conditions on revolutionary policies and programs of Chinese Communist Party. Exploration of etiology of 1989 Tiananmen crisis and consequent China of collapse of Communism in East Europe and the Soviet Union.

160. Government and Politics of Japan. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 50. Designed for juniors/seniors: Structure and operation of contemporary Japanese political system, with special attention to domestic political forces and problems.

163A. Asian Politics. (4) (Formerly numbered 163.) Lecture, three or four hours; discussion, one hour (when scheduled). Regularities in language used to talk or write about politics across states preceding emergence of universal-horizontal axes. Problems of collective action in oppression, contribution of shared identities to organizing collective action, role of discourse in cueing awareness of shared identity, evidence across time and space of association between discursive distance and undemocratic rule (monarchy, exclusive republics, dictatorship), Letter grading.

163B. Colonialism, Discourse, and Democracy. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Transformation of language used to talk or write about politics during era of European colonialism and resulting shifts in identity ensuing in political change. Theories of democracy, dynamics of colonial encounter between Europeans and peoples living outside Europe, problems of collective action in tyranny and democracy, consequences of sharing identity for collective transformation of discourse in response to colonialism and ensuing enfranchisement in Europe, North America, and Southwestern Pacific, spread of enfranchisement following discursive transmission and self-identification in states emerging in formerly colonized territories. Letter grading.

164A. Roots of Democracy. (4) Lecture, three or four hours; discussion, one hour (when scheduled). De- signed for juniors/seniors. Survey of development of democracy around world from its beginnings in ancient Greece to present day. Techniques of comparatist policies used to evaluate major arguments about why different countries become democratic at different times, and why some remain authoritarian. P/NP or letter grading.

164B. Fascism and Right-Wing Extremism: Historical and Future Perspectives. (4) Lecture, three or four hours; Der hours; discussion, one hour (when scheduled). De- signed for juniors/seniors. Historical rise of Fascism in Germany, Italy, Japan, and Eastern Europe; its social support and rationale. Focus on Germany, including Nazi economic policy (Tooze, Wages of Destruction). Do today's xenophobic movements in Europe and U.S. resemble earlier Fascism in ideology and social base? P/NP or letter grading.

165. Islam and Politics. (4) Lecture, three or four hours; discussion, one hour (when scheduled). De- signed for juniors/seniors. Religion and spiritual foundations of Islamic legal and political institutions; legitimacy of historical and contemporary Islamic re- gimes, movements, and ideologies; political strategies of Islamic activism. P/NP or letter grading.

166. Comparative Constitutional Design. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Comparisons of major institutional structures such as presidentialism versus parliamentarism, unicamerality versus bicameralism, two-party versus multiparty systems, federal versus unitary systems, plurality versus pro- portional electoral systems, etc. Method of analysis is rational choice (political actors are assumed to opti- mize their results given institutional constraints and action of other actors). Result is that institutions affect political outcomes in systematic ways. P/NP or letter grading.

167C. Political Economy of Development. (4) (Same as International Development Studies M120.) Lecture, three or four hours; discussion, one hour (when scheduled). Preparation: two courses in Field IV, or course 30 and one course in Field IV. Designed for ju- niors/seniors. Major approaches to study of comparative politics. Concepts and methodology of compara- tive analysis. Letter grading.


169. Special Studies in Comparative Politics. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Preparation: two courses in Field IV. Designed for juniors/seniors. Intensive examination of one or more special problems appropriate to compara- tive politics. Sections offered on regular basis, with topics announced in preceding term. May be re- peated for credit with topic change. P/NP or letter grading.

Field V: Methods and Models


171B. Collective Choice and Majority Rule. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 30. Designed for ju- niors/seniors. How do different ways of counting and casting votes affect political decisions? When can voting rules be manipulated by leaders and voters? Examples from legislative, electoral, and judicial polit- ics. P/NP or letter grading.

171C. Legislative Strategy. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requi- site: course 30. Designed for juniors/seniors. How do politicians get policy changes passed by legislatures, city councils, and other voting bodies? Applications of game-theoretic reasoning to common strategies and tactics in legislative settings. P/NP or letter grading.

171D. Negotiation. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 30. Designed for juniors/seniors. Study of nego- tiation and bargaining in different contexts. Experi- mental exercises with emphasis on various aspects of negotiation, including: coalition formation, honesty, and role of agents. P/NP or letter grading.

172. Strategy and Conflict. (4) Lecture, three or four hours; discussion, one hour (when scheduled). En- forced requisite: course 30. Designed for juniors/seniors. Intermediate topics in game theory applied to political problems, with special attention to strategic consequences of incomplete information and infor- mation asymmetries. Letter grading.

179. Special Topics in Methods and Models. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 30. Designed for juniors/seniors. Intensive examination of one or more special problems related to methods and models in political science. Sections offered on regular basis, with topics announced in preceding term. May be re- peated for credit with topic change. P/NP or letter grading.

Field VI: Race and Ethnic Politics

M180A. African American Political Thought. (4) (Same as African American Studies M114C and Labor and Workforce Studies M114D.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Use of statistical methods to interpret data and test theories from various fields in political science and use of quantitative evidence in construction of convincing and truthful arguments. Based on African American social movements, and relationship between political thought and movements for labor in Western thought. P/NP or letter grading.

181A. Politics of Latino Communities. (4) (Formerly numbered 181B.) Lecture, three or four hours; discussion, one hour (when scheduled). Required: one 100-division course or one upper-division course in race or ethnicity from history, psychology, or sociology. Requisite: course 40. Designed for juniors/seniors. Focus on understanding relationships of power and interaction between institutional contexts of Latino life, such as economy, state, and cultural system on one hand and structure of everyday life in Latino households, neighborhoods, and communities on the other. P/NP or letter grading.

M181B. U.S. Latino Politics. (5) (Formerly numbered 181B.) (Same as Chicana and Chicano Studies M155B.) Lecture, four hours; discussion, one hour (when scheduled). Required: one 100-division course or one upper-division course in race or ethnicity from history, psychology, or sociology. Requisite: course 40. Designed for juniors/seniors. Study of the contemporary role of Latinos in U.S. political system. Topics include historical analysis of Latino immigra- tion and migration; civil rights movement; increases in citizenship registration; and/or for in 1990s; new wave of anti-immigrant attitudes; Develop- ment, Relief, and Education for Alien Minors (DREAM) Act and subsequent DREAMer movement; and response by Latinos today, with discussion of role of Latino vote in recent presidential elections. P/NP or letter grading.

M182. Ethnic Politics: African American Politics. (4) (Same as African American Studies M114.) Lecture, three or four hours; discussion, one hour (when scheduled). Preparation: one 140-level course or one upper-division course on race or ethnicity from history, psychology, or sociology. Requisite: course 40. Designed for juniors/seniors. Use of statistical methods to interpret data and test theories from various fields in political science and use of quantitative evidence in construction of convincing and truthful arguments. Relationship of African Americans being primary case for analysis. Three pri- mary objectives: (1) to provide descriptive information about social, political, and economic conditions of black community, (2) to analyze important political is- sues facing black Americans, (3) to sharpen students' analytical skills. P/NP or letter grading.

M184A. Black Experience in Latin America and Caribbean I. (4) (Same as African American Studies M154C.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Comparative Study of Culture, history, politics, and identity of African Ameri- canians in Spanish and Lusophone Caribbean, South
America, and Central America. Exploration of issues of identity in context of Afro/Latino migration to U.S.
P/NP or letter grading.

M184B. Black Experience in Latin America and Caribbean II. (4) Same as African American Studies M154DC. Lecture, four hours; laboratory, one hour (when scheduled). Recommended requisite: course 104D. Examination of issues regarding race and ethnicity in Latin America, with emphasis on comparisons to U.S. and within Latin America. Covers populations of African and indigenous origins, with emphasis on former, P/NP or letter grading.

186. Special Studies in Race, Ethnicity, and Politics. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Recommended requisite: course 40. Designed for juniors/seniors. Intensive examination of one or more special problems related to race, ethnicity, and politics in political science. Sections offered on regular basis, with topics announced in preceding term. May be repeated for credit. P/NP or letter grading.

Special Studies

190. Research Colloquia in Political Science. (1) Seminar, one hour. Designed to bring together students undertaking supervised tutorial research in seminar setting with one or more faculty members to discuss their own work or related work in discipline. Led by one supervising faculty member. May be repeated for credit. P/NP grading.

190H. Honors Research Colloquia in Political Science. (1) Seminar, one hour. Designed to bring together students writing departmental honors theses in seminar setting with one or more faculty members to discuss their thesis work in progress. Led by one supervising faculty member. P/NP grading.

191A-191E. Variable Topics Research Seminars for Majors. (4 each) Seminar, three hours. Preparation: two upper-division courses in field in which seminar is offered. Limited to junior/senior Political Science majors with 3.25 grade-point average in upper-division political science courses. Consult Schedule of Classes for topics to be offered in specific term. Reading, discussion, and development of culminating project. May be applied toward distribution or concentration requirement. May be repeated for credit. P/NP or letter grading.


M191DC. CAPPP Washington, DC, Research Seminars. (8) Same as Communication M191DC, History M191DC, and Sociology M191DC. Seminar, three hours. Preparation: limited to CAPPP Program students. Seminars for undergraduate students in Center for American Politics and Public Policy’s program in Washington, DC. Focus on development and execution of original empirical research based on experiences from Washington, DC-based field placements. Study of variety of qualitative methods (observation, interviewing, etc.), with comparison to quantitative analysis. Examination of features of solid and significant research; intensive writing. Letter grading.

191H. Research Design Seminar for Honors Theses. (4) Seminar, four hours. Preparation: one course in 191 series, 3.5 grade-point average in upper-division political science courses, eligibility for Letters and Science honors. Required of all students who wish to write honors thesis. Students define their research topic, select suitable research method, determine appropriate sources of information, prepare research proposal, find thesis director, begin their research, and submit progress reports or preliminary drafts. Class sessions emphasize critical and constructive discussion of students’ topics, methods, and problems in research, as well as general consideration of political science research topics and methods of current or continuing interest. May be repeated for credit. Letter grading.

195. Journal Club Seminars: Political Science. (1) Seminar, two hours. Limited to undergraduate students. Discussion of readings selected from current literature of field. Consult Schedule of Classes for topics to be offered in specific term. May be repeated for credit. P/NP grading.

194. Research Group Seminars: Political Science. (2) Seminar, three hours. Designed for undergraduate students who are part of research group. Discussion of research methods and current literature in field of research each assigned to 3-4 students. May be repeated for credit. P/NP grading.

M194DC. CAPPP Washington, DC, Research Seminars. (4) Same as History M194DC and Sociology M194DC. Seminar, three hours. Limited to CAPPP Quarter in Washington students and other students enrolled in UC Washington Center programs. Seminars for undergraduate students in Center for American Politics and Public Policy’s program in Washington, DC. Focus on development and execution of original empirical research based on experiences from Washington, DC-based field placements. Study of variety of qualitative methods (observation, interviewing, etc.), with comparison to quantitative analysis. Examination of features of solid and significant research; intensive writing. Letter grading.

195CE. Community and Corporate Internships in Political Science. (4) Seminar, two hours. Tutorial, four hours. Preparation: limited to CAPPP Program students. Internships in Washington, DC, through Center for American Politics and Public Policy. Students meet on regular basis with instructor and provide periodic reports of their experience. Individual contract with supervising faculty member required. P/NP or letter grading.

M195DC. CAPPP Washington, DC, Internships. (4) Same as History M195DC and Sociology M195DC. Tutorial, four hours. Limited to junior/senior CAPPP Program students. Internships in Washington, DC, through Center for American Politics and Public Policy. Students meet on regular basis with instructor and provide periodic reports of their experience. Individual contract with supervising faculty member required. P/NP or letter grading.

198. Honors Research in Political Science. (1 to 4) Tutorial, two hours. Requisite: course 191H. Limited to juniors/seniors. Development and completion of honors thesis or comprehensive research project under direct supervision of faculty member. May be repeated for credit. Individual contract required. Letter grading.

199. Directed Research in Political Science. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

Formal Theory and Quantitative Methods


200D. Quantitative Methods in Politics. (4) Seminar, three hours. Preparation: knowledge of calculus, basic probability, and statistics, including linear regression and experience with computing in R. Recommended requisite: course 200C. Focus on causal inference in social science settings, particularly where randomized experiments are not (or are not) feasible or impossible to implement. Introduction to commonly used estimation techniques, with focus on conditions under which they produce causal estimates. Emphasis on understanding and maximizing credibility of causal claims researchers can make given pragmatic limitations. S/U or letter grading.

200E. Advanced Topics in Quantitative Methods. (4) Seminar, three hours. Topics vary each year and have included instrumental variables principal components and scaling, models of selection, models of duration, ecological inference, and hierarchal models. Student-led presentations on relevant statistical methodology and application to political situations and replications of well-known studies used to demonstrate how various models work and how they are applied in practice. S/U or letter grading.

200Y-200Z. Data Analysis Workshops. (2-2) Seminar, two hours. Enforced requisite: course 200C. Course 200Y is enforced requisite to 200Z. Not open for credit to students with credit for course 200Y. Practice in applying statistical techniques to political science data. S/U or letter grading.

200Y-200Z. Data Analysis Workshops. (2-2) Seminar, two hours. Enforced requisite: course 200C. Course 200Y is enforced requisite to 200Z. Not open for credit to students with credit for course 200X. Practice in applying statistical techniques to political science data. S/U or letter grading.

201. Introduction to Formal Political Analysis. (4) Seminar, three hours. Survey of formal political theory to enhance literacy and provide analytical tools without presupposing mathematical background. Model building, collective goods, unanimity and the social contract, voting rules, paradoxes and impossibility theorems, stability, individual liberty and decentralization, strategic manipulation representation, vote trading.

201A. Theory of Collective Choice. (4) Seminar, three hours. Recommended preparation for political science students: course 201A. Open to any student of political economy or mathematics with ability for deductive reasoning. Introduction to abstract, deductive study of voting systems and other collective-choice processes. Axiomatic method applied to politics and political economy, concept of rationality, and agenda control, choice-set or solution concepts.


203A. Economic Theory and Methods for Political Science I. (4) Discussion, three hours. Preparation: knowledge of elementary calculus. Introduction to techniques of economic analysis and survey of major topics in formal political economy, Investigation of models of regulation, trade protection, collective bargaining, and economic growth as time permits.

203B. Economic Theory and Methods for Political Science II. (4) Discussion, three hours. Requisite: course 203A. Continuing survey of microeconomic techniques used in formal political science, with focus on market failures and on modeling individual choice in nonmarket situations. Specific topics include externalities, public goods, public choice, mechanisms, collective action, spatial models, structure-induced equilibrium, and information asymmetries.
Political Science

204A. Game Theory in Politics I. (4) Seminar; three hours. Survey of game theory, with emphasis on utilizing mathematical models to understand political and economic phenomena. Applications concern political participation, public goods, legislatures, industrial regulation, bureaucracies, interest groups, and party competition. Designed to help students become informed consumers of game-theoretical literature in political science. S/U or letter grading.

204B. Game Theory in Politics II. (4) Seminar; three hours; fieldwork, eight hours. Requisites: course 204A. Intermediate game theory course. Topics include games of incomplete information, cheap talk games, and bargaining theory. Applications concern political participation, public goods, legislatures, bureaucracies, conflict, and communication. Designed to help students use game theory in their research. S/U or letter grading.

204C. Game Theory in Politics III. (4) Seminar; three hours; fieldwork, eight hours. Requisites: courses 204A, 204B. Advanced game theory course, with emphasis on new and/or advanced techniques. Topics include truels, epistemic logic, and bargaining theory. Applications concern political participation, public goods, legislatures, bureaucracies, conflict, and communication. Designed to help students use game theory in their research. S/U or letter grading.

208. Bayesian Econometrics. (4) Same as Economics M220A.) Lecture, three hours. Preparation: calculus or introductory probability. Designed for graduate economics and political science students. Survey and applications of major solution concepts to models of bargaining, oligopoly, cost allocation, and voting power. S/U or letter grading.

210A. Introduction to Political Theory. (4) Lecture, two hours. Introduction to major themes in political theory, with particular attention to the political thought of Plato through Aquinas; and to modern political theory. S/U or letter grading.

210B. International Relations Core Seminar II. (4) Seminar, three hours. Further academic work in international relations and introduction to the major research perspectives currently represented by UCLA faculty, visiting scholars, and advanced graduate students. Research paper of publishable length and quality required. S/U or letter grading.


International Relations

220A. International Relations Core Seminar I. (4) Seminar, three hours. Introduction to international relations theory: main schools of thought, methods of analysis, and research perspectives currently represented by UCLA faculty, visiting scholars, and advanced graduate students. Research paper of publishable length and quality required. S/U or letter grading.

220B. International Relations Core Seminar II. (4) Seminar, three hours. Further academic work in international relations and introduction to the major research perspectives currently represented by UCLA faculty, visiting scholars, and advanced graduate students. Research paper of publishable length and quality required. S/U or letter grading.

220C. International Relations Research Seminar. (4) Seminar; three hours; tutorial meetings, to be arranged. Design, implementation, and presentation of research project in international relations within combination of seminar and tutorial settings. Letter grading.

222. Strategic Interaction. (4) Seminar, three hours. A strategic move influences the other person's choice by affecting his expectations of how we will behave. Discussion of theories of deterrence, coercive diplomacy, crisis management, war termination, and negotiation. Use of various theoretical approaches to explaining strategic interaction, including psychology, bargaining theory, and game theory.

223. Politics and Strategies of Modern War. (4) Seminar, three hours. Analysis of various national security problems in both their military/technical and political dimensions.

225. American Foreign Policy. (4) Discussion, three hours. Discussion of approaches used to explain foreign policy-making at individual, small group, bureaucratic, and domestic politics levels. Application to selected cases in American foreign policy.


230. Contending Perspectives on International Political Economy. (4) Discussion, three hours. Survey of various theoretical approaches to international political economy.

231. International Political Economy I. (4) Seminar, three hours. Interaction between international trade and investment and domestic economic and political methods of both industrialized and industrializing societies.

232. International Political Economy II. (4) Seminar, three hours. Designed to develop PhD students' skills in setting up and solving complex institutional design, political economy macro, signaling, and participation models, as well as two-level game models of domestic politics and international conflict and cooperation, with emphasis on applications in international political economy and comparative politics.

233A-233B-233C. Political Economy Workshops (4-4-4). Discussion, two hours. Preparation: successful completion of major field examinations. Workshops for students writing or preparing to write dissertations. Reading and discussion of research in progress presented by UCLA faculty, visiting scholars, and advanced graduate students. Research paper of publishable length and quality required. S/U or letter grading.

234A-234B-234C. Workshops: National Security, Foreign Policy, and International Relations (0-0-12). Discussion, two hours. Preparation: successful completion of major field examinations. Course 234A is requisite to 234B, which is requisite to 234C. Courses must be taken in sequence. Workshops for students preparing for or working on dissertations. Reading and discussion of research in progress presented by UCLA faculty, visiting scholars, and advanced graduate students. Major research paper required. In Progress (234A, 234B) and letter (234C) grading.

239. Selected Topics in International Relations. (4) Seminar; three hours. S/U or letter grading.

Comparative Politics

240A-240B. Seminars: Comparative Politics. (4-4) Seminar; three hours. Course 240A is not requisite to 240B. Letter grading. 240A. Survey of ideas and approaches that have been historically important in field of comparative politics, with selection of theories and methodologies that have comprised field over time. 240B. Survey of contemporary research approaches and problems in comparative politics, with a range of theories and methodologies used by practitioners in the field.


244. Latin American Politics. (4) Seminar; three hours. Survey of contemporary research approaches and problems in Latin American politics. S/U or letter grading.

245. Middle Eastern Politics. (4) Seminar; three hours. Survey of contemporary research approaches and problems in Middle Eastern politics. S/U or letter grading.

246A. Western European Politics. (4) Seminar; three hours. Survey of contemporary research approaches and problems in Western European politics. S/U or letter grading.

246B. Political Development of Modern Europe. (4) Seminar; three hours; discussion, one hour (when scheduled). Principal phases of political development from high feudalism to the present, together with theories of causation.


247A. Evolution of Soviet and Russian Politics. (4) Seminar; three hours; discussion, one hour (when scheduled). Discussion seminar surveying political evolution of Soviet Union and its transformation.

247B. Domestic Context of Russian Foreign Policy. (4) Seminar; three hours. Examination of domestic social, political, bureaucratic, and organizational sources of Russian foreign and strategic policy, S/U or letter grading.

251. Political Economy of Economic Reform. (4) Discussion, three hours. Some familiarity with economics helpful. Principal political and economic arguments for economic reform and consideration of political issues that arise from this process. Letter grading.

252. Parties and Party Systems. (4) Seminar, three hours. Examination of political context and consequences of structural reform in Communist systems; theories of post-Leninist political pluralization and convergence.

254A-254B. Institutions and Comparative Politics. (4-4) Seminar, three hours; discussion, one hour (when scheduled).

254A. Comparative Institutional Analysis. (4) Seminar, three hours; discussion, one hour (when scheduled). Use of advances of rational choice theory and new institutionalism to compare and analyze major institutional structures, including presidentialism vs. parliamentaryism, unicameralism vs. bicameralism, two-party vs. multiparty systems, cadre vs. mass parties, and presidential vs. semi-presidential electoral systems.

254B. Political Institutions, Delegation, and Policy-Making. (4) Seminar, three hours; discussion, one hour (when scheduled). Examination of political foundations of policy-making. Characterization of democratic institutions as a series of delegations, from voters to elected officials, within parties and legislatures, and from elected politicians to unelected bureaucrats as implications of different institutional designs for how those delegations are made and controlled.

255. Seminar: Political Economy of Developing Countries. (4) Seminar, three hours. Interdisciplinary seminar directed toward comparative analysis of political development and modernization. S/U or letter grading.

256. External Sources of Domestic Politics. (4) Discussion, three hours. Theoretical and historical studies of impact of war and trade on domestic cleavages, policy, and institutions. S/U or letter grading.

257. Labor and Working-Class Politics. (4) Discussion, three hours. Questions and topics on comparative labor and working-class politics. S/U or letter grading.

258. Comparative Politics Proseminar. (2) Seminar, 90 minutes. Biweekly speaker series featuring presentations of unpublished research papers by comparative politics faculty members as well as external scholars. Required participation and written assignments. S/U or letter grading.

259. Selected Topics in Comparative Politics. (4) Discussion, three hours. Critical examination of major political problems in comparative politics. S/U or letter grading.

American Politics


261A. Political Psychology. (4) (Same as History M236A and Psychology M228A.) Seminar, three hours. Introduction to political psychology: psychobiography, personality and politics, mass attitudes, group conflict, political communication, and elite decision making.

261B. Mass Attitudes and Political Behavior. (4) Seminar, three hours. Requisite: course 141B or 260A. Analysis of development and change of political attitudes in mass publics and their relationship to voting, protest, and violence. S/U or letter grading.

261C. Political Communication. (4) Discussion, three hours. Broad survey of research bearing on role of mass media in the American political process. Topics include theories of persuasion, evolution of “media effects” research, reporting and advertising as determinants of election outcomes, adversarial versus deliberative journalism, and analysis of media bias.

261D. Seminar: Political Psychology. (4) (Same as Psychology M228B.) Discussion, three hours. Requisite: course M261A or Psychology 220A. Examination of political behavior, political socialization, racial conflict, mass political movements, and public opinion. S/U or letter grading.

261E. Critical Problems in Political Psychology. (4) (Same as Psychology M228C.) Discussion, three hours. S/U or letter grading.

262. Political Parties. (4) Seminar, three hours. Critical examination of literature on party systems and organization. Special attention to political functions, electoral campaigns, and party cadres. S/U or letter grading.


266. Group Theories of Politics. (4) Discussion, three hours. Critical appraisal of group theory approaches to study of political decision making, with special attention to empirical research problems and findings. S/U or letter grading.


268B. Electoral Democracy: Theory and Behavior. (4) (Same as Public Policy M246.) Seminar, three hours. Examination of both empirical and normative questions from rich variety of perspectives for scholars in all subfields of political science as well as policy students interested in these issues. Consideration of topics fundamental to both democratic theory and study of American politics—public opinion; nature and purpose of elections; representation; parties; and purpose of democracy as whole—through both classical political theory treatments and modern research in American political behavior. Letter grading.


270. Legislative Behavior. (4) Seminar, three hours. Analysis of major approaches to study of representative institutions, with special emphasis on assumptions, conceptual and theoretical implications associated with each approach. S/U or letter grading.

271. Executive Politics and Presidency. (4) Seminar, three hours. Examination of executive organization and leadership, with emphasis on American Presidency. Special attention to theories of organization and personality and relationship between executive and other institutions and groups. S/U or letter grading.


Race, Ethnicity, and Politics

M287A-M287B. Immigration, Racial Change, and Education in 21st-Century Metropolis. (4-4) (Same as Education M289A-M289B, Public Policy M289A-M289B, and Sociology M290A-M290B.) Seminar, four hours. Examination of metropolitan American society and institutions at beginning of 21st century. Consideration of best available information on patterns of settlement, changing functions of urban space and institutions, and issues of opportunity linked to urban structure in society facing unprecedented demographic change that will end primarily European domination of our society by mid-century, creating democracy with no racial or ethnic majority. How this demographic transition and postindustrial transformation of urban functions and space interact to shape opportunity and inequality? What were previously extremely important parts of intergenerational mobility? In Progress (M287A) and letter (M287B) grading.

288A. Approaches to Study of Race, Ethnicity, and Politics. (4) Seminar, three hours. Analysis of alternative theoretical, methodological, and empirical approaches to study of race, ethnicity, and politics. S/U or letter grading.

288B. Current Research on Race, Ethnicity, and Politics. (4) Seminar, three hours. Exploration of current research on race, ethnicity, and politics. S/U or letter grading.

Special Studies

290. Modern Political Economy. (4) Discussion, three hours. Discussion of implications for understanding politics of thinking of politicians, bureaucrats, policymakers, corporations, as utility maximizers. Topics include microfoundations for macromodels, forms of political participation, state, government regulation, growth of government, bureaucratic elections, public policy, inflation. S/U or letter grading.

292A. Introduction to Political Inquiry: Problems of Scientific Inquiry and Normative Discourse. (2) Seminar, two hours; discussion, one hour (when scheduled). S/U or letter grading. Preparation: interest in issue areas.

292B. Introduction to Political Inquiry: Research Design. (4) Seminar, three hours; discussion, one hour (when scheduled). Design of qualitative and quantitative empirical research projects. S/U or letter grading.

293. Great Ideas in Social Sciences. (2) Seminar, two hours. Vehicle for faculty and visitors to teach research seminars of variable length. Special training opportunities on advanced quantitative methods, including complexity theory, agent-based modeling, experimental economics, social cognitive neuroscience, and evolutionary psychology, to be offered at irregular intervals. May be repeated for credit. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Teaching Political Science. (4) Seminar, to be arranged. Seminar in teaching methodologies, including evaluation of each student's own performance as a teaching assistant. Normally to be taken by all new teaching assistants in first term of their assistantships. May be taken only in term in which students are teaching assistants. May not be applied toward MA or PhD course requirements. S/U grading.

501. Cooperative Program. (2 to 8) Preparation: consent of UCLA graduate adviser and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with US or SU grading.

596. Directed Individual Study or Research. (2 to 4) Tutorial, to be arranged. May be applied only three times toward minimum course requirement in first two years. May be repeated. S/U or letter grading.

597. Preparation for PhD Qualifying Examinations. (2 to 12) Tutorial, to be arranged. May be repeated. S/U grading.
The primary goals of the internship are to promote the development of effective clinical practitioners trained to provide professional services in related to the mental health professions of the biobehavioral sciences in addition to its programs for psychiatry interns and residents and for medical students. Enrollement in department courses is limited to registered UCLA students, students registered in programs officially affiliated with UCLA, and students enrolled concurrently through UCLA Extension. Students who meet these requirements, but who are not affiliated with a departmental training program, must also meet required course requisites determined by specific educational programs.

Clinical Psychology Internship

The department offers a 12-month Clinical Psychology Internship. Students enrolled in clinical psychology doctoral programs at APA-approved universities are eligible to apply. Applications are accepted through November 1. The primary goals of the internship are to provide students with a year of intensive exposure to a wide variety of clinical and human services experiences, and to maximize the personal growth of each professional. Students interested in this certificate program should contact David Crawford, 37-360A Semel Institute, 310-794-5715.
Information on clinical practicums that are offered in conjunction with other educational institutions and UCLA departments may be obtained from the department office.

Psychiatry and Biobehavioral Sciences

Lower-Division Course

79. Applied Positive Neuroscience: Skills for Improving Productivity and Wellbeing. (5) Lecture, three hours of discussion, one hour. Not open to students with credit for Community Health Sciences 179. Intrapersonal, interpersonal, and extrapersonal contributors to wellbeing, and how activity and chemistry of key brain regions contribute to each, e.g. influences of mindfulness on prefrontal cortex activity, or how oxytocin system is altered by social interaction. Students learn to recognize relationship between cognitive, social, and emotional competence for healthy development, and how to apply it to their own lives. Through neuroscientific concept, introduction to multidisciplinary perspectives on variety of topics that are relevant for understanding mental health problems for young adults, including emotion regulation, managing social relationships, enhancing productivity, and identity development. Letter grading.

Upper-Division Courses

175. Mindfulness Practice and Theory. (4) Seminar, five hours. Designed for beginners; prior experience with meditation not required. Introduction to mindfulness, including basic mindfulness meditation practices, both sitting and moving, ways to deepen positive emotions like gratitude, kindness, and joy, and methods for integrating more awareness and creativity into ordinary activities. Examination of various meditative traditions as well as emerging science and beneficial effects of mindfulness practice for mental and physical health. Beneficial effects include reduced distress, increased attention, reduced emotional reactivity, and greater mind-body awareness. Learning and development of practical skills of relational mindfulness in interactions with others. Offered in summer only. P/NP or letter grading.

M180. Contemporary Problems in Developmental Disabilities. (4) [Same as Psychology M180.] Seminar, three hours. Corequisite: course M181A. Limited to Developmental Disabilities Program students. Examination of current issues related to developmental retardation, intelligence and IQ, genetics, neurobiology, and other developmental disabilities. P/NP or letter grading.

M181. Biological Bases of Psychiatric Disorders. (4) [Same as Molecular Biology M175A, and Cell, and Developmental Biology M182, or Physiological Science M180A or Psychology M117A] Lecture, three hours. Requisite: Neuroscience M101A (or Molecular, Cell, and Developmental Biology M175A or Physiological Science M180A or Psychology M117A) or Physiological Science 111A or Psychology 117A. Underlying brain systems involved in psychiatric symptoms and neurological disorders, including schizophrenia, depression, bipolar disorder, obsessive-compulsive disorder. Provides basic understanding of brain dysfunctions that contribute to disorders and rationales for pharmacological treatments. P/NP or letter grading.

M181A. Research in Contemporary Problems in Developmental Disabilities. (4) [Same as Psychology M181A] Seminar, one hour; laboratory, eight hours. Corequisite: course M180. Limited to Developmental Disabilities Program students. Research experience. In Progress grading (credit to be given only on completion of course M181B).


M182. Personal Brain Management. (4) [Formerly numbered 182.] (Same as Neuroscience M181) Seminar, four hours. Basic overview of brain function and consideration of some management methods that exist already, and what future may hold. New methods for proper futures and how to select what scenarios that might alter risks and benefits of different courses of action, based on individual genetic background and other elements of personal history and environmental exposures. Introduction to principles from science of behavior change, illustrating how important health-related behavioral habits are and how difficult these can be to change and why. Overview of series of topics that center on personal enhancement of well-being through consideration of stress management, long-term goal and value identification, mapping of long-term goals onto immediate actions, reinforcement learning, meditation, neuro-feedback, and time management. Critical appraisal of tools to help students distinguish scientifically validated procedures. Offered in summer only. Letter grading.

197. Individual Studies in Psychiatry. (2 to 4) Seminar, four hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between instructor and student. Assigned reading and tangible evidence of mastery of subject matter required. May be taken for letter grade only. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research in Psychiatry and Biobehavioral Sciences. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culuminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

M210. Editorial Board Apprenticeship. (2) [Same as Health Policy and Management M249K] Seminar, two hours. Designed for postdoctoral fellows and advanced PhD students. Participation in peer review process for academic journal, Health Psychology, with consideration of interface between behavioral science, health, and medicine. Reading and discussion of submissions and advising of editor on suitability for full review. S/U or letter grading.


M230. Communication of Science. (2) [Same as Biostatistics M235.] Lecture, two hours; discussion, one hour. Presentation of various types of scientific writings and their good practice. Details of writing specific articles: methods, results, discussion. Writing of review article. Grant submissions: aims, background, results, design, Review of grant applications. Communique with lay public. S/U or letter grading.


M234. Affective Disorders. (2 or 4) [Same as Psychology M234, or Biostatistics M234] Seminar, two hours; discussion, one hour. Requisite: Biostatistics 200A. General topics related to primary affective disorders (depression, manic depressive illness), including diagnosis, pharmacology, epidemiology, psychology, phenomenology, biology, and cultural considerations. Students enrolled for 4 units are assigned a more intensive reading list and required to make a presentation or prepare a research paper.


237. Seminar: Behavioral Genetics. (1) Seminar, one hour per month; discussion, 30 minutes per month. Series of lectures presented the second Wednesday of each month throughout academic year by invited speakers. S/U grading.

M238. Survey Research Techniques in Psychocultural Studies. (4) [Same as Psychology M238.] Seminar, three hours. Designed for graduate students. Techniques for conceptualizing, conducting, and analyzing survey data. Discussion of strategies for enhancing survey research on psychocultural problems.

M240. Assessment and Treatment of African American Families. (3) [Same as African American Studies M240] Seminar, two hours. Designed for graduate students. Course aids mental health professionals and trainees in evaluation and treatment of African American families in terms of their cultural milieu, historical background, and economic status. Didactic presentations by instructors and invited guests form basis for supervised evaluation and case management with African American children and families. Letter grading.


M246. Psychological Aspects of Mental Retardation. (4) [Same as Psychology M246] Lecture, 90 minutes. Discussion of psychological aspects of mental retardation, including classification, description, etiology, theory, prevention, treatment, assessment, modern and future developments, and input from other disciplines (ethics, law, religion, welfare systems). Letter grading.

253. Seminar: Child Development. (1) Theories of development, systems of child development, and chronological aspects of child development. Presentation of assigned readings by students plays major role in each session.


259. Legal and Ethical Issues with Vulnerable Populations. (3) Lecture, 90 minutes; laboratory, three and one half hours. Discussion of current laws dealing with vulnerable populations (e.g., children, developmentally disabled people, elderly people); philosophies, ethics, ethical codes, issues, and how to resolve them. Use of videotapes and discussion of cases.


M263. Clinical Pharmacology. (2) [Same as Biostatistics M263 and Medicine M263] Lecture, two hours. Preparation: completion of professional health sciences degree (M.D., D.D.S., D.N.Sc., or Ph.D). Overview of principles of clinical pharmacology, especially as they relate to clinical and translational medicine and to advances in contemporary medicine such as targeting, gene therapy, and genomics. Letter grading.
264. Health and Mental Health Disparities from Psychosocial and Cultural Perspectives. (4) Seminar, three hours. Designed for graduate and medical students, resident physicians, and juniors/seniors (with consent of instructor) interested in learning about general, social, and mental health disparities. Survey course to introduce students to health disparities that exist for ethnic minorities and factors that may contribute to disproportionate prevalence rates. Review and discussion of research literature, focus on specific diseases such as HIV/AIDS, substance abuse, depression, and breast and prostate cancer. Discussion of historical and cultural factors affecting health and treatment of ethnic populations. Examination of psychosocial and cultural contexts as potential or contributing factors. S/U or letter grading.

270. Cultural Anthropology. (4) (Same as Anthropology M237.) Seminar, three hours. Three different topics discussed per term. Topics to be centered around current anthropological issues. May be repeated for credit with topic change. S/U or letter grading.

M272. Functional Neuroimaging. (2-2-2) Seminar, two hours, discussion one hour. Anatomical, physiological, and neurological data integrated into models for how behavioral phenomena of memory arise. Discussion of invertebrate memory, cortical conditioning, hippocampus and declarative memory, and frontal lobes and primary memory.

M273. Advanced Seminar: Medical Anthropology. (2-4) Seminar as Anthropology M263Q, Community Health Sciences M244, and Nursing M273.) Seminar, three hours. Limited to 15 students. Examination of interdisciplinary approaches to human development in biological, social, culture, ecology, health, and lineage. Focus on written critical analysis and class discussion provided through key theoretical works. S/U or letter grading.


275. Psychoneuroimmunology Research Seminar. (1) Seminar, one hour. Topics to be centered around current directions in psychoneuroimmunology (PNI), including social genomics, inflammation, and biological aging. Common molecular and immunological protocols and techniques used in current direct directions in PNI research, with emphasis on basic immunology and immunological/molecular biology and role of behavioral and psychological factors on immune and cell-aging processes. S/U grading.


281A-281B-281C. Behavioral Therapy in Educational Settings. (4-4-4) Lecture, one hour; laboratory, seven hours. Supervised experience in classroom working with exceptional children in conducting systematic observations, administering formal assessments, and developing and implementing individual educational and behavioral programs. Theoretical background furnished through one-hour weekly lecture. S/U or letter grading.

M284A-M284B. Principles of Neuroimaging I, II. (4) (Same as Psychology M284A-M284B and Psychology M288A-M288B.) Lecture, four and one half hours. Preparation: competence in integral calculus, electricity and magnetism, computer programming (any language) and general statistics. Requisite course: course 292. Course M284A is requisite to M284B. Instructional methods for study of nervous system, with emphasis on quantitative understanding and data interpretation and features common to modalities. X-ray computed tomography, magnetic resonance imaging, positron emission tomography, magnetoencephalography, and near infrared imaging. Letter grading.

M285. Functional Neuroimaging: Techniques and Applications. (3) (Same as Bioengineering M284, Neuroscience M285, Physics and Biology in Medicine M285, and Psychology M278.) Lecture, three hours. In-depth examination of activation imaging, including MRI and electrophysiological methods, data acquisition and analysis. Emphasis on understanding processes and obtained thus far in human systems. Some focus on understanding technologies, how to design activation imaging paradigms, and how to interpret results. Laboratory visits and design and implementation of functional MRI experiment. S/U or letter grading.

287. Small Group Cognitive/Behavioral Interventions. (4) Lecture, three hours. Presentation of brief therapeutic interventions for adults and children at risk for suicide, depression, conduct problems, and HIV, with didactic and experiential techniques.

M288. Social and Behavior Factors of HIV/AIDS: Global Perspective. (4) (Same as Community Health Sciences M294.) Lecture, four hours. Requisites: Community Health Sciences 100, 100, or prior social sciences courses. Overview of social and behavioral factors which influence both transmission and prevention of HIV/AIDS throughout the world. Letter grading.


290. Los Angeles HIV-Community Colloquia. (1) Lecture, two hours. Examination of emerging scientific HIV-related research, public policies, theories, and designs of HIV-related services and programs and shifting epidemiology of the virus and disease. S/U grading.


293. Professional Development: Presentations and Preparation for Academic Interviews. (2) Seminar, two hours. Exposure to range of professional development skills essential to academic career development. Hands-on skills and practice in preparing and delivering presentations for various audiences, and preparing research and/or teaching statements for job applications. S/U grading.

294. Essentials of Clinical Investigation. (2) Lecture, two hours; discussion, two hours. Designed for graduate students. Introduction to initial steps in clinical research through preparation of research proposal. Small workshops to develop grant proposal on specific topic. S/U grading.


296. (2) Seminar, two hours; discussion, one hour. Neurobiological and psychopharmacological drug abuse, as well as epidemiology and prevention. Discussion of pros and cons of various treatment modalities for drug dependence. S/U grading.

296B. (2) Seminar, two hours; discussion, one hour. Drug use patterns and treatment issues in specific populations such as women, adolescents, homeless, multiply diagnosed, as well as different ethnic populations. Exploration of drug abuse, sexual abuse, and HIV/AIDS. S/U grading.

295C. (2) Seminar, two hours; discussion, one hour. Theoretical perspectives on drug use and abuse as well as policy and ethical aspects of drug abuse research. Research design and analysis issues pertinent to drug abuse research. S/U grading.

M321. Medical Ethics Group Seminar. (2) Research group meeting, three hours. Designed for graduate students who plan to conduct research studies. Coverage of (1) publishing process—submitting manuscripts for publication, (2) peer review of manuscripts, (3) revision of manuscripts, (4) response to reviewers’ comments, (5) frequently asked questions, (6) key points in journal rejection of manuscripts, and key points in writing articles for publication, (7) three National Institutes of Health (NIH) guidelines, (8) grants application process, grant application process, fund raising mechanisms, and review process, (9) preparing writing grants for submission to NIH, including review of components of successful applications, criteria by which applications are judged, and what to emphasize in each section, (10) grant mechanisms specifically designed for new investigators, (11) human subject protection for grant applications and IRB issues, and (12) preparation of budgets (modular and detailed) and budget justification for NIH submissions. S/U or letter grading.

402. Journal Club. (1) Seminar, two hours; outside study hours. Presentation of current research in current research. Critical review of recent articles on drug abuse. Training sessions included in areas in which fellows believe they have a recognized need. S/U or letter grading.

403. Individual Case Supervision. (1 to 4) Preparatory: submission of written proposal to be structured by instructor and student prior to enrollment; additional information and proposal forms available in Office of Education, 38-216 Semel Institute. One-to-one supervision of individual therapy cases, including analyses of patient data, supervision of ongoing treatment, informal didactic sessions on personality theory, and applications to patient management. S/U or letter grading.

405. Trauma and Sexual Abuse Research Seminar. (4) Seminar, three hours; discussion, one hour. Designed for graduate and medical students and residents interested in learning about biobehavioral trauma research. Introduction to DSM-IV TR diagnostic criteria for posttraumatic stress disorder (PTSD), as well as biopsychosocial sequelae. Examination and discussion of child and adult sexual abuse in context of being causative precursors of acute and chronic causes of PTSD. Evaluation of allostatic load, and biological factors on cardiovascular and physiological markers for PTSD. Review of current modes of treatment, including pharmacological and psychological interventions. Discussion of research methods, particularly important for trauma research. S/U or letter grading.

407A-407B-407C. Clinical Hypnosis Seminars. (2-2-2) Seminar, two hours. Integrated, experimentally oriented sequence with lecture, demonstration, practice, and assigned readings. Guest speakers with expertise in specific hypnotic applications and populations, and video programs included. Trainees and faculty members in healthcare professions as well as licensed healthcare providers from community (MCEP credit available) encouraged to enroll. For trainees in social work, psychology, and psychiatry, completion of minimum of one year of supervised training in psychotherapy. Separate group required. S/U grading.

407A. Cultural and historical context for hypnosis; development of technical competence in trance induction, deepening, managing, and maintaining trance states. Focus on trance experiences. 407B. Fundamentals of trance utilization, including induction, creating safety, and facilitating exploratory trance experiences. 407C. Application of hypnotic interventions for specific clinical situations and with specific populations.

M424. Functional Magnetic Resonance Imaging Journal Club. (2) (Same as Physics and Biology in Medicine M424.) Discussion seminar limited to 10 students. Current topics in functional neuroimaging, with emphasis on novel applications, analysis, and acquisition methods. Presentation and critique of
student papers. Overall emphasis on magnetic resonance imaging. Example areas include tractography through diffusion tensor imaging, jittered event-related experimental designs, parallel receiver MR imaging, integrated electrophysiological and image acquisition. S/U or letter grading.


431A-431B-431C. Pediatric Neuropsychology: Assessment, Diagnosis, and Treatment Planning. (1-1-1) Seminar, one hour. Presentation of didactics on developmental disorders, pediatric syndromes, and acquired brain injury in children. Coverage of methods of assessment in children, with focus on neuropsychological testing. Presentation of differential diagnosis and treatment planning. S/U grading. 431A. Developmental disorders, including autism, Asperger’s, mental retardation, specific learning disabilities, and Attention-Deficit/Hyperactivity Disorder. Current conceptualizations of these disorders used to form assessment techniques, including choice of instruments and interpretation of results. Practical issues in pediatric neuropsychological assessment, including ethics, educational advocacy based on IDEA, ADA, and Section 504 of Rehabilitation Act on behalf of children with learning disabilities, behavior disorders, and mental retardation. S/U or letter grading.

430A. Single-Subject Design in Behavior Research. (1) Seminar, one hour. Preparation: introductory genetics course. Weekly lecture series intended for those interested in human genetics or in specific topic to be presented. Speakers are invited for their expertise or research in some special area related to human genetics and may be from UCLA or elsewhere. No grading.

431B. Neuropsychological assessment, cognition and psychometrics/test development. Focus on odd years on current models of human neuropsychological assessment, cognition and genetics, and psychometrics/test development. Focus in even years on current models of human neuropsychology, such as models of working memory, neuropsychology of emotion and social cognition, models of implicit versus explicit learning, types of attention, and models of executive processes. S/U grading.

431C. Implementation of research from previous two terms in case presentation format, supplemented with various guest speakers.

434. Seminar: Attentional Psychology. (1) Seminar, one hour. Cutting-edge research in neuroscience of addictive behavior, using both animal models and human participants. Neuroscience findings regarding multiple addictive substances (e.g., stimulants, alcohol, nicotine) and related behavioral traits (e.g., impulsivity, risk taking). Some lectures provided by nationally recognized invited guest speakers. S/U grading.


450. Clinical Practicum in Childhood Anxiety and Related Disorders. (3) Clinic, two hours. Training in cognitive/behavioral assessment and treatment of children and adolescents with anxiety and related disorders. Didactic and experiential training, including direct patient care, clinical supervision, and participation in weekly team meetings. Letter grading.


468. Translational Neurosciences of Drug Addiction. (1) Lecture, one hour. Designed for graduate students. Students need cross-disciplinary knowledge to understand drug abuse etiology, behavior, consequences, and treatment. Coverage of major topics in drug addiction by emphasizing use of animal models to understand human addiction and to disclose how findings derived from human studies can be used to expand development of animal models. S/U grading.

479. Genetics Clinic Presentation. (No credit) Weekly clinic teaching session on patients seen in preceding genetics clinic. In-depth discussion on genetics of each disorder.

480. Analysis of Human Chromosome Studies. (1) Laboratory work in cytogenetics laboratory during preceding week presented and discussed with reference to clinical findings. Teaching includes interpretation of abnormal karyotypes and technical aspects of routine and special chromosome stains.

485. Human Genetics Seminar. (No credit) Seminar, one hour. Preparation: introductory genetics course. Weekly lecture series intended for those interested in human genetics or in specific topic to be presented. Speakers are invited for their expertise or research in some special area related to human genetics and may be from UCLA or elsewhere. No grading.

490. Educational Advocacy. (2) (Same as Law M431). Clinic, two hours (12 weeks). How to provide educational advocacy based on IDEA, ADA, and Section 504 of Rehabilitation Act on behalf of children with learning disabilities, behavior disorders, and mental retardation. S/U or letter grading.

596P. Individual Studies in Psychology. (2 to 12) Tutorial, to be arranged. Preparation: submission of written proposal outlining course of study (to be structured by instructor and student at time of initial enrollment). Additional information and course proposal forms available in Office of Education, 38-216. Directed individual research study in psychiatry at graduate level. S/U or letter grading.

431B-431C-431A. Pediatric Neuropsychology: Assessment, Diagnosis, and Treatment Planning. (1-1-1) Seminar, one hour. Preparation: introductory genetics course. Weekly lecture series intended for those interested in human genetics or in specific topic to be presented. Speakers are invited for their expertise or research in some special area related to human genetics and may be from UCLA or elsewhere. No grading.

431A-431B-431C. Pediatric Neuropsychology: Assessment, Diagnosis, and Treatment Planning. (1-1-1) Seminar, one hour. Preparation: introductory genetics course. Weekly lecture series intended for those interested in human genetics or in specific topic to be presented. Speakers are invited for their expertise or research in some special area related to human genetics and may be from UCLA or elsewhere. No grading.

431B. Neuropsychological assessment, cognition and psychometrics/test development. Focus on odd years on current models of human neuropsychological assessment, cognition and genetics, and psychometrics/test development. Focus in even years on current models of human neuropsychology, such as models of working memory, neuropsychology of emotion and social cognition, models of implicit versus explicit learning, types of attention, and models of executive processes. S/U grading.

431C. Implementation of research from previous two terms in case presentation format, supplemented with various guest speakers.

434. Seminar: Attentional Psychology. (1) Seminar, one hour. Cutting-edge research in neuroscience of addictive behavior, using both animal models and human participants. Neuroscience findings regarding multiple addictive substances (e.g., stimulants, alcohol, nicotine) and related behavioral traits (e.g., impulsivity, risk taking). Some lectures provided by nationally recognized invited guest speakers. S/U grading.


450. Clinical Practicum in Childhood Anxiety and Related Disorders. (3) Clinic, two hours. Training in cognitive/behavioral assessment and treatment of children and adolescents with anxiety and related disorders. Didactic and experiential training, including direct patient care, clinical supervision, and participation in weekly team meetings. Letter grading.


468. Translational Neurosciences of Drug Addiction. (1) Lecture, one hour. Designed for graduate students. Students need cross-disciplinary knowledge to understand drug abuse etiology, behavior, consequences, and treatment. Coverage of major topics in drug addiction by emphasizing use of animal models to understand human addiction and to disclose how findings derived from human studies can be used to expand development of animal models. S/U grading.

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431A-431B-431C. Pediatric Neuropsychology: Assessment, Diagnosis, and Treatment Planning. (1-1-1) Seminar, one hour. Preparation: introductory genetics course. Weekly lecture series intended for those interested in human genetics or in specific topic to be presented. Speakers are invited for their expertise or research in some special area related to human genetics and may be from UCLA or elsewhere. No grading.

431B. Neuropsychological assessment, cognition and psychometrics/test development. Focus on odd years on current models of human neuropsychological assessment, cognition and genet
Scope and Objectives
Psychology is a subject of considerable interest to most people—we all tend to practice some form of intuitive psychology in an attempt to understand ourselves and the people and groups with whom we interact. The curriculum offered by the Department of Psychology presents psychology as a scientific discipline that employs systematic methods of inquiry to study and explain human and animal behavior—both normal and abnormal—in terms of a variety of underlying variables, including neural, physiological, and cognitive processes; developmental factors and individual differences; and social and interpersonal influences and contexts. According to recent surveys, the Psychology Department is ranked as one of the top departments in the country.

The undergraduate curriculum has been designed to reflect the extensive breadth of psychology—both the range of behavioral phenomena studied and the variety of methods and theoretical approaches employed—while allowing students to pursue in greater depth those areas in which they become most interested. Beyond basic core courses, students can take many specialized courses in areas such as behavioral neuroscience, animal behavior, learning and memory, motivation, perception, cognition, measurement, personality, and clinical, social, developmental, community, and health psychology. The curriculum also provides excellent opportunities for research experience—either in the form of laboratory courses or by participation with faculty members and graduate students in a wide variety of research projects.

A choice of three undergraduate majors is offered: a BA degree in Psychology and BS degrees in Cognitive Science and in Psychobiology. While the majors overlap in certain fundamental and basic knowledge bases, they differ considerably in their focus (i.e., the extent to which certain areas of psychology and related disciplines are studied) and in terms of the different student interests and needs they satisfy. For nonmajors, the department offers many courses that provide students with new and valuable insights into the understanding of human behavior, including their own.

At the graduate level, the department offers training leading to the PhD degree with emphases in the areas of behavioral neuroscience, clinical, cognitive, cognitive neuroscience, developmental, health, learning and behavior, social, and quantitative psychology. The graduate program is designed to prepare future psychologists for careers as scientific investigators, college and university teachers, and professional psychologists.

Undergraduate Study
The Cognitive Science major is a designated capstone major. Students are required to produce a paper based on each term of their experience in a research laboratory or approved fieldwork site. Through completion of the capstone experience students are expected to identify a research topic and hypothesis to be tested or a fieldwork project and goals, show that they can organize and integrate information related to the topic or project in a clear manner in their own words, demonstrate ability to find and utilize supporting literature relevant to their project or topic, and successfully relate the paper to their experience in the laboratory or fieldwork setting.

Psychology BA
The Psychology major is the most general of the three majors and offers both broad and in-depth coverage of the fundamental and traditional areas of psychology. It provides students with a strong foundation for postgraduate education in psychology and can serve as excellent background to prepare them for further training in such fields as law, education, government and public policy, business, and many of the health-related professions. Its basic liberal-arts orientation also provides students with an excellent foundation for immediate postbaccalaureate careers in many areas, particularly ones in which an understanding of human behavior and its diversity of expression would be an asset.

The requirements described below represent the minimum requirements in satisfaction of the preparation and the major. Additional courses in psychology, statistics, and related sciences, as well as other types of research and fieldwork experiences, are highly recommended if students plan to pursue graduate work in psychology and related fields. Under special circumstances, graduate-level courses can be taken by undergraduate students, although such courses may not be applied toward degree requirements for the major. For additional information, contact the Undergraduate Advising Office, 1531 Franz Hall.

Psychology Premajor
Students need to file a petition in the Undergraduate Advising Office to declare the Psychology premajor. Psychology premajors can petition to declare the Psychology major once they have (1) satisfied all the preparation for the major requirements and (2) are accepted into the major through a competitive application process (for students who entered UCLA as freshmen) or file a petition to declare the Psychology major (for students who entered UCLA as transfers).

Preparation for the Major
Each of the following required courses must be taken for a letter grade (C or better in Psychology 10, 100A, and 100B, C– or better in the remaining courses): Life Sciences 1 or 7A or 15 or Physiological Science 3; Chemistry and Biochemistry 2 or 14A or 17 or 20A or Physics 10 or 11 or 1A or 6A; one course from Mathematics 2, Program in Computing 10A, Statistics 10, or one term of calculus; one course from Philosophy 1, 2, 3, 4, 5, 6, 7, 8, 9, 21, 22, 22W, 23, 31, Psychology 10, 100A, 100B. Students cannot take Psychology 100B until they have passed course 100A with a grade of C or better. Psychology 100A and 100B are only open to students who have declared the Psychology premajor before the term in which they plan to enroll. It is recommended that students with no background in introductory statistics take Statistics 10 before enrolling in course 100A.

Students who repeat more than two preparatory courses or any preparation course more than once are denied admission to the major.

Freshman Students
Students may declare the Psychology premajor once they have established a 2.5 grade-point average in at least one preparation for the major course.

Students must petition to declare the Psychology major and can do so once they complete all seven preparation for the major courses and submit an application to enter the major by the end of the fall quarter of their third year at UCLA. Admission into the major is based on student academic performance in the preparation courses. Students who have a grade-point average of 2.9 or higher in the preparation coursework and have met all other Psychology premajor requirements are guaranteed entry into the major after they submit the application by the above deadline. Students with a grade-point average between 2.5 and 2.89 in the preparation coursework enter a competitive application pool and are admitted only if there is space available in the major. Students with a grade-point average below 2.5 in the preparation coursework are not eligible to apply for admission to the major.

Transfer Students
Transfer applicants to the Psychology major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one biology course equivalent to Life Sciences 1 or 15 or Physiological Science 3,
one general chemistry or general physics course, one philosophy course, one introduction to psychology course, and one course from statistics (recommended), finite mathematics, calculus, computer science theory, or computer programming in C++.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

After satisfying the preparation for the major requirements, students need to petition to enter the major at the Undergraduate Advising Office.

The Major

Required: (1) Five core courses, with at least two from each category and a fifth course from either category: (a) Psychology 110, 115 (or M117A, M117B, and M117C), 120A, 120B, and (b) 127A or 127B or 127C, 130 (or one course from 133A through 133I or 161), 135, 150; (2) one laboratory/fieldwork course from 101, 111, 116, 121, 126, 131, 136A, 136B, 136C, 151, 186A through 186D; (3) four additional upper-division elective courses (16 units) in psychology.

Students who complete Psychology M117A, M117B, M117C receive equivalent credit for course 115 and two upper-division psychology electives. All three courses must be completed to receive psychology elective credit.

Each upper-division course must be taken for a letter grade. A C- or better is required in each core course and in at least one laboratory/fieldwork course. Students must have a 2.0 grade-point average in all upper-division courses selected to satisfy major requirements.

Cognitive Science BS

Capstone Major

The Cognitive Science major focuses on the study of intelligent systems, both real and artificial. While including a strong foundation in the traditional areas of psychology, the major is interdisciplinary in nature and emphasizes subject matter within cognitive psychology, computer science, mathematics, and related disciplines.

The requirements described below include sufficient preparation if students plan to pursue graduate work in cognitive science or related fields; however, they may want to include additional advanced courses in psychology and fields related to cognitive science (e.g., computer science, linguistics, mathematics, philosophy, and statistics) as well as other types of research and fieldwork experiences. Under special circumstances, graduate-level courses can be taken by undergraduate students, although such courses may not be applied toward degree requirements for the major. For additional information, contact the Undergraduate Advising Office, 1531 Franz Hall.

Cognitive Science Premajor

Students need to file a petition in the Undergraduate Advising Office to declare the Cognitive Science premajor. They are then identified as Cognitive Science premajors until they (1) satisfy the preparation for the major requirements and (2) file a petition to declare the Cognitive Science major. Questions about the major should be directed to the Undergraduate Advising Office, 1531 Franz Hall.

Preparation for the Major

Each of the following required courses must be taken for a letter grade (C or better in each course and a 2.5 overall grade-point average in the preparation courses) before students reach 140 total units: Life Sciences 1 or 7A or 15 or Physical Sciences 3; Chemistry and Biochemistry 2 or 14A or 17 or 20A or Linguistics 1 or 20 or Physics 10 or 11 or 1A or 6A; Mathematics 3A, 3B, and 3C, or 31A and 31B; Philosophy 7 or 8 or 9 or 23 or 31; Program in Computing 10A and two courses from 10B, 10C, 15, 16, 20, 30, 40A, 60, Psychology 20A, 20B; and Psychology 10, 85, 100A, 100B. Students cannot take Psychology 100B until they have passed course 100A with a grade of C or better. Psychology 100A and 100B should be taken early in the career; these courses are open only to students who have declared the Cognitive Science premajor before the term in which they plan to enroll. Students with no background in introductory statistics should take Statistics 10 before enrolling in course 100A.

Students who repeat more than two preparation courses or any preparation course more than once are denied admission to the major.

Transfer Students

Transfer applicants to the Cognitive Science major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one biology course, one general chemistry or general physics course, two calculus/analytical geometry courses, one general physics course, one philosophy course, one introduction to psychology course, one introduction to cognitive science course, one psychological statistics course, one psychology research methods course, one computer programming course in C++, and one other computer programming course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

After satisfying the preparation for the major requirements, students need to petition to enter the major at the Undergraduate Advising Office.

Required: (1) Psychology 115 (or M117A, M117B, and M117C), 120A, or 120B, and one course from 124A through 124K; (2) two courses from 111, 116, 121, 126, 186A through 186D, Computer Science 161; (3) three upper-division elective courses (12 units) from Psychology 110, 112A through 116, M117J through M119X, 120A, 120B, 124A through 124K (if taken for the major, may not be applied as an elective), 130, 133A, 133E, 135, 137G, 142H, 160, 161, M166, 187A, 191CH (if content is approved by the Undergraduate Advising Office and course has not been applied toward the Psychology 195B or 196B requirement), Anthropology 124Q, 136A, M150, Communication 118, 119, 126, M127, 129, Computer Science 111 through CM186, Ethnomusicology 172A, Linguistics 103 through 185B, Mathematics 110A through 171, Music Industry 133, Neuroscience 102, M145, C177, 180, 181, 182, Philosophy 124 through 136, Statistics 100A, 100B, 100C, 101B, 101C; and (4) in the junior or senior year, two capstone terms of Psychology 195B or 196B (may be fulfilled by taking any two courses from 195B or 196B or 196B/194C, provided content is approved by the Undergraduate Advising Office).

Students who complete Psychology M117A, M117B, M117C receive equivalent credit for course 115 and two upper-division cognitive science electives. All three courses must be completed to receive cognitive science elective credit.

Students must have a 2.0 grade-point average in all upper-division courses selected to satisfy major requirements. With the exception of Psychology 195B and 196B, each course must be taken for a letter grade.

Psychobiology BS

The Psychobiology major is designed for students who plan to go on to postgraduate work in physiological psychology, neuroscience, behavioral aspects of biology, or the health sciences. Psychobiology is the study of behavior from a biological perspective. It includes neural, experimental psychological, natural history, genetic, comparative/evolutionary, and developmental approaches to understanding human and animal behavior.

The requirements described below include sufficient preparation if students plan to pursue graduate work in any of the above fields; however, they may want to include additional advanced courses in psychology and related sciences as well as other types of research and fieldwork experiences. Under special circumstances, graduate-level courses can be taken by undergraduate students, although such courses may not be applied toward degree requirements for the major. For additional information, contact the Undergraduate Advising Office, 1531 Franz Hall.

Psychobiology Premajor

Students need to file a petition in the Undergraduate Advising Office to declare the Psychobiology premajor. They are then identified as Psychobiology premajors until they (1) satisfy the preparation for the major requirements and (2) file a petition to declare the Psychobiology major.

Preparation for the Major

Life Sciences Core Curriculum

Required: Chemistry and Biochemistry 14A, 14B, 14BL, 14C, and 14D, or 20A, 20B, 20L, 30A, 30AL, and 30B; Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A, or Life Sciences 30A, 30B, and Statistics 13: Physics 1A, 1B, 1C, 4AL, and 4BL, or 5A, 5B, and 5C.

Students must also complete one of two life sciences sequences—either Life Sciences 1, 2, 3, 4, and 23L OR 7A, 7B, 7C, and 23L. They may not substitute courses in either sequence.
Also required are Psychology 10, 100A, 100B. Students cannot take Psychology 100B until they have passed course 100A with a grade of C or better. Psychology 100A and 100B should be taken early in the career; these courses are open only to students who have declared the Psychobiology major before the term in which they plan to enroll. Students with no background in introductory statistics should take Statistics 10 before enrolling in course 100A.

Each of the preparation for the major courses must be taken for a letter grade (C or better in Psychology 10, 100A, and 100B, C- or better in the remaining courses) with a 2.0 overall grade-point average. Student must complete all preparation for the major courses by the end of the summer quarter of their third year to be eligible to petition to declare the Psychobiology major.

Students who repeat more than two preparation courses or any preparation course more than once are denied admission to the major.

Transfer Students

Transfer applicants to the Psychobiology major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of general biology with laboratory for majors, preferably equivalent to Life Sciences 1 and 2 OR 7A, 7B, and 7C; one year of calculus, one year of general chemistry with laboratory for majors, one semester of organic chemistry with laboratory, one introduction to psychology course, one psychological statistics course, and one psychology research methods course. A second semester of organic chemistry or one year of calculus-based physics is strongly recommended but not required for admission.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

After satisfying the preparation for the major requirements, students need to petition to enter the major at the Undergraduate Advising Office.

Required: (1) Ecology and Evolutionary Biology 100 or 129 or Psychology 118, and Psychology 110, 115 (or M117A, M117B, and M117C), 116 or Neuroscience 101L, 120A or 120B; (2) one course from Psychology 127A, 127B, 127C, 130, 133A through 133I, 135, 150, 161; (3) 16 units of graded elective courses from the following list: Ecology and Evolutionary Biology 112, 113A, 114A (no more than one from this group), Psychology 111, 112A through 112D, M117A, M117B, M117C, M117J, M119A through M119X, 124K, 137G, 152, 160, 161, 162, 164, M166, 166D, 191CH (only if content is approved by the undergraduate vice chair), Chemistry and Biochemistry 153A, 153L, Computational and Systems Biology M187, Ecology and Evolutionary Biology 100, 102, 105, 106, 110, 111, 115, 117, C119A, 120, 121, 122, 124A (only 4 units may be applied toward the major), 129, C135, 164, 170, Life Sciences 107, Microbiology, Immunology, and Molecular Genetics 185A, Molecular, Cell, and Developmental Biology 100, 104AL, 138, M140, CM156, Neuroscience 102, Physiological Science C144, 146, 147, 166, 173.

Students who complete Psychology M117A, M117B, M117C receive equivalent credit for course 115 and 10 units of upper-division psychology electives. All three courses must be completed to receive psychobiology elective credit.

Students must have a 2.0 grade-point average in all upper-division courses selected to satisfy major requirements, and each must be taken for a letter grade.

Honors

Honors Courses

Each year the department offers a selection of honors courses, designated with an H suffix. The courses provide close contact with faculty members, emphasize readings in the original literature, student reports, and small group discussions, and may include field or research experience. Contact the College of Letters and Science for information on requirements for College Honors.

Honors Program

Psychology, Cognitive Science, and Psychobiology majors intending to continue study at the graduate level are encouraged to apply for the departmental honors program. Students work for one year (fall through spring quarters) with a Psychology Department faculty sponsor on a research project that is the basis of a formal honors thesis. During that year they also participate in a weekly seminar (Psychology 191AH, 191BH, 191CH) in which thesis projects are presented and discussed and other topics of interest are explored with invited faculty members and other guests. Other requirements may apply. Contact the Undergraduate Advising Office during spring quarter for further information and application forms. Satisfactory completion of the program and the other requirements for the major leads to awarding of the degree with honors or highest honors.

Computing Specialization

Majors in Psychology, Psychobiology, and Cognitive Science may select a specialization in Computing by (1) satisfying all the requirements for a bachelor’s degree in the specified major, (2) completing four courses from Program in Computing 10A, 10B, 10C, 15, 16, 20A, 30, 40A, 60, Psychology 20A, 20B, and (3) completing at least one course from Psychology 115, 127C, 127F, 130, 131, 132A, 132B, 133B through 133I, 134F, 134G, 134H, 161, 199A or 199B (content must be approved by the Undergraduate Advising Office), Sociology M174. One of the four additional courses must include either Psychology 130 or one course from 133B through 133I.

Required Lower-Division Course (4 units): Psychology 10.

Required Upper-Division Courses (24 units): Psychology 134A (must be taken concurrently with course 134D), 134B (must be taken concurrently with course 134E), and four additional courses from Education 120, 121, 132, Psychology 127C, 129F, 130, 131, 132A, 132B, 133B through 133I, 134F, 134G, 134H, 161, 199A or 199B (content must be approved by the Undergraduate Advising Office), Sociology M174. One of the four additional courses must include either Psychology 130 or one course from 133B through 133I.

Internship Requirement/Fieldwork Component (8 units): Psychology 134C, 134D (must be taken concurrently with course 134A), 134E (must be taken concurrently with course 134B). Students work as interns for three consecutive academic terms at one of several UCLA child care centers serving infants, toddlers, and/or preschool-age children. The internship provides hands-on experience working with young children and opportunities to closely observe children and teachers.

No more than two courses may be applied toward both this minor and a student’s major. A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor. Each minor course, except for the fieldwork component of the internship courses, must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Cognitive Science Minor

The Cognitive Science minor is designed to introduce students to cognitive science topics as addressed in a number of different disciplines, such as biology, computer science, engineering, linguistics, mathematics, philoso-
phy, and psychology, while allowing them to pursue a more in-depth study of cognitive science topics within specific areas of their own choice.

The minor consists of two parts. In the first part students complete background courses and satisfy a computer programming experience requirement. In the second part they select a primary cluster from four clusters of upper-division courses that have been organized to reflect different aspects of cognitive science. Students take three courses within their primary cluster and two additional courses from the remaining clusters (secondary clusters).

The minor is open to all enrolled UCLA students, other than Cognitive Science majors, who have an overall grade-point average of 2.0 or better. Students must make an appointment with a counselor in the Undergraduate Advising Office, 1531 Franz Hall, 310-225-2730, to enter the minor and receive counseling on how to select a primary cluster.

**Required Courses (32 units):** Psychology 85; one course from 15, 100B, Computer Science 2, Linguistics 1, or 20; and either Program in Computing 10A or Psychology 20A.

Students must complete five total courses from the following three clusters, with no more than three courses from any particular cluster: (1) biological basis of cognition cluster—Biomatics 108, Linguistics C135, Music Industry 103, Neuroscience 102, M145, C177, 180, 181, 182, Psychology 110, 115, 116, M117C (or Molecular, Cell, and Developmental Biology M175C or Neuroscience M101C or Physiological Science M180C), 119B, 119C, 119F, M119L, M119N, 137G, 160, 161, 166; (2) human cognition cluster—Anthropology 124Q, 136A, Communication 129, Psychology 120A, 120B, 121, 124A through 124K, 133B, 133C, 133E, 186A through 186D; (3) mind and language cluster—Anthropology M150, Communication 119, 119, 126, M127, Linguistics 120A, 120B, 120C, 130, 132, C135, 185A, Philosophy 124, 125, 126, C127A, C127B, 129, 170, 172, Psychology 124A.

No more than two courses may be applied toward both this minor and a student’s major.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Fieldwork and Research Opportunities**

Many research and fieldwork opportunities are open to students who wish to expand their knowledge and broaden their background in the field of psychology. These experiences can be enriching and help bring undergraduate students closer to understanding the importance of research and internships, including their applications in the everyday world. At least one of the following courses is recommended for students planning postgraduate study: Psychology 98, 185, 192, 194A through 194D, 195A, 195B, 196A, 196B, 199A, or 199B. Only 12 units from any combination of courses 185, 192, 194, 195, and 196 may be applied toward the undergraduate degree. Information about these courses and programs is available from the Undergraduate Advising Office, 1531 Franz Hall.

Only one 4-unit 199 course may be taken per term, and only 16 units of course 199 may be applied toward the degree. Only one 199 course may be taken for a letter grade (additional 199 courses may be taken on a P/NP basis). If approved in advance by the Undergraduate Advising Office, 5 units of course 195 may be applied toward the Psychology 195B/196B requirement for the Cognitive Science major and 4 units of course 199B may be applied toward the elective course requirements for the Psychology major.

**Psychology Research Opportunity Programs**

The Psychology Research Opportunity Programs (PROP) represent a vital effort to identify and mentor underrepresented minority and/or low-income students. The purpose of PROP is to encourage such students to participate in research and pursue graduate studies leading to careers in academia. The recruitment and application process for PROPS takes place each fall quarter. Students selected to participate are awarded stipends for winter and spring quarters, during which time they do research under the mentorship of a psychology faculty member. In addition, students are required to attend weekly seminars covering such topics as graduate school, careers in academia, and research opportunities in various fields of psychology. Prior research experience is not required. This is an excellent opportunity for students to begin their research careers and acquire the needed experience to pursue advanced studies.

**Infant Development Program**

The Megan E. Daly Infant Development Program (IDP), established in May 1983, is designed as a teaching and research facility for the department and is set up to accommodate both cross-sectional and longitudinal investigation of infants, toddlers, their families, and caregivers. In addition, the program provides an opportunity for undergraduate students in developmental psychology and other areas to acquire firsthand experience working with infants and toddlers on an individual basis or in a group setting. The program has two primary functions: (1) to offer quality group care for infants and toddlers of the students, staff, and faculty of the Psychology Department and other UCLA departments and (2) to serve as a teaching and research facility for the Psychology Department and the UCLA community. The program has two locations (1611 Franz Hall and Fernald Center at 320 Young Drive North) and accommodates children from three months to three years old. Students in the Applied Developmental Psychology minor can complete their fieldwork at one of the IDP locations.

**UCLA Psychology Clinic**

The UCLA Psychology Clinic in the Department of Psychology is a major training center for students in the clinical psychology PhD program, one of the top-ranked programs in the country. It provides a broad range of psychological services to children and adults, including assessment and individual, couples, family, and group therapy. Clients cover the entire age range and represent diverse populations in the community.

Student therapists receive very close supervision and utilize research-based cutting-edge psychological interventions. Students and faculty members are also involved in a variety of research projects through the clinic.

**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

**Graduate Degrees**

The Department of Psychology offers Master of Arts (MA), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Psychology.

**Psychology**

**Lower-Division Courses**

10. Introductory Psychology. (4) Lecture, four hours. General introduction including topics in cognitive, experimental, personality, developmental, social, and clinical psychology; six hours of psychological research and a grade of C or better required of all departmental premajors. P/NP or letter grading.


20A. MATLAB Programming for Behavioral Sciences. (4) Lecture, two hours; laboratory, one hour. Prior programming experience not required. Introduction to MATLAB and programming methods useful in experimental psychology. Reading and writing of code for conducting experiments, analyzing data, and modeling. P/NP or letter grading.

20B. Advanced Topics in MATLAB Programming for Behavioral Sciences. (4) Laboratory, one hour. Requisite: course 20A. Introduction of advanced topics in MATLAB programming for behavioral sciences, including Psychtoolbox, advanced MATLAB graphics and input/output, simulations and modeling, and efficient MATLAB coding. Active programming during class and for homework required. P/NP or letter grading.

88A-88Z. Lower-Division Seminars. (4 each) Seminar, three hours. Enforced requisite: course 10. Limited to freshmen/sophomores. Intensive analysis in...
97. Variable Topics in Psychology. (4) Seminar, three hours. Enforced requisite: course 10. Study of selected topics in psychology at introductory level; seminar format designed for freshmen/sophomores. P/NP or letter grading.

Upper-Division Courses

100A. Psychological Statistics. (4) Lecture, four hours. Requisites: course 10 with a grade of C or better, and one course from Computer Science 2, Mathematics 2, Program in Computing 10A, Statistics 10, or one term of calculus. Designed for premajors. Basic statistical procedures and their application to research and practice in various areas of psychology. Letter grading.

100B. Research Methods in Psychology. (6) Lecture, two hours; laboratory, four hours. Enforced requisites: courses 10 and 100A, with grades of C or better. Interaction of methods and strategies for the critical analysis in psychology. Lecture and laboratory topics include experimental and nonexperimental research methods, statistical design and analysis as applied to a broad range of basic and applied research issues. P/NP or letter grading.

101. General Psychology Laboratory. (4) Lecture, one hour; laboratory, three hours. Requisites: courses 10, 100A, 100B. General laboratory course for psychology students to learn and review key concepts in psychology through active participation in enriched environment. Use of current technologies (e.g., web-based teaching, interactive computer demonstrations) in challenging framework to learn how mind works. Letter grading.


110. Fundamentals of Learning. (4) Lecture, three hours; discussion, one hour. Requisites: courses 10, 100A. Designed for juniors/seniors. Experimental findings on animal and human conditioning; retention and transfer of learning; and the learning and motivation intended to provide empirical basis for theory and research in this area. P/NP or letter grading.

111. Learning Laboratory. (4) Lecture, two hours; laboratory, three hours. Requisites: courses 10, 100A, 100B, 110. Designed for departmental majors. Laboratory experience with techniques in study of learning, especially with animals. Letter grading.

112A. Basic Processes of Motivated Behavior. (4) Lecture, five hours; discussion, 90 minutes. Requisites: courses 10, 100A, 110. Designed for juniors/seniors. Examination of some basic processes underlying motivated behavior, stressing environmental determinants of behaviors such as feeding, drinking, and reproduction-related behavior. Discussion of physiological mechanisms that contribute to such behaviors. Consideration of topics such as reinforcement, avoidance, escape, and drug addiction. Evaluation of evidence obtained in laboratory studies conducted with animals. P/NP or letter grading.

112B. Psychobiology of Fear and Anxiety. (4) Lecture, three hours; laboratory, two hours. Recommended: course 115. Designed for juniors/seniors. Presentation of biological and behavioral approaches to fear and anxiety, taken from laboratory and applied research. In addition to overview of major principles from each approach, emphasis on areas in which significant research advances have recently occurred. Examination of concordance and discordance between results from laboratory and applied research. P/NP or letter grading.

112C. Psychobiology of Anxiety and Depression. (4) Lecture, two and one half hours; discussion, 30 minutes; laboratory, two hours. Requisites: courses 10, 100A, 110, and M101C. Limited to juniors/seniors. Presentation of biological and behavioral approaches to anxiety and depression, taken from laboratory and applied research. In addition to overview of major principles from each approach, emphasis on areas in which significant research advances have recently occurred. Examination of concordance and discordance between results from laboratory and applied research. P/NP or letter grading.

112D. Animal Cognition. (4) Lecture, 90 minutes; discussion, 90 minutes. Requisites: courses 10, 100A, 110. Designed for juniors/seniors. Investigation of scientific study of cognition and behavior in animals. Topics include perception and attention, working and reference memory, spatial cognition, timing and counting, concept formation, and abstract reasoning. Most discussions focus on laboratory findings with animals, as viewed from evolutionary framework concerned with natural histories of animals. P/NP or letter grading.

115. Principles of Behavioral Neuroscience. (4) Lecture, three hours; discussion, one hour. Requisites: course 100A, Life Sciences 2 or 15. Not open to students with credit for course M117A. Designed for juniors/seniors. Nervous system anatomy, physiology, pharmacology, and their relationship to behavior. P/NP or letter grading.

116. Behavioral Neuroscience Laboratory. (4) Lecture, one hour; laboratory, three hours. Requisites: courses 10, 100A, 100B, 115. Designed for Psychobiology and Psychology majors. Laboratory experience with various topics in behavioral neuroscience. P/NP or letter grading.


M117A. Cellular and Systems Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisites: Chemistry 14C or 30A (14C may be taken concurrently), Life Sciences 2, Physics 1B or 15B or 68B. Not open for credit with or substitute for Physiological Science 111A. For Neuroscience and Physiological Sciences majors, grade of C– or better is required to proceed to Neuroscience M101B or Physiological Science M111B. Nervous system anatomy and physiology, membrane potential, action potentials, and synaptic transmission. Sensory systems and motor system; how assemblies of neurons process complex information and control movement. P/NP or letter grading.

M117B. Molecular and Developmental Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisites: course 115 or M117A (or Molecular, Cell, and Developmental Biology M175A or Neuroscience M101A or Physiological Science M180A; Neuroscience majors must have grade of C– or better) or Physiological Science 111A. Neural mechanisms, cellular and molecular, classical experiments and modern molecular approaches in developmental neurobiology. P/NP or letter grading.

M117C. Behavioral and Cognitive Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisites: course 115 or M117B (or Molecular, Cell, and Developmental Biology M175A or Neuroscience M101A or Physiological Science M180A; Neuroscience majors must have grade of C– or better) or Physiological Science 111A. Neural mechanisms, cellular and molecular, classical experiments and modern molecular approaches in developmental neurobiology. P/NP or letter grading.


119C. Cognitive Neuroscience. (4) Lecture, three hours. Requisite: course 115 or M117C. Understanding complex mental functions depends on interplay of cognitive psychology and behavioral neuroscience. Designed to provide advanced undergraduate students with current perspectives on how complex processes of mind may be understood using neuroscience techniques. P/NP or letter grading.


119F. Human Neurophysiology. (4) Lecture, three hours. Requisite: course 115. Designed for departmental majors. Laboratory experience with techniques in study of learning, especially with animals. Letter grading.

119G. Brain, Mind, and Motion Pictures. (4) Lecture, 90 minutes; screenings/discussion, two and one half hours. Requisite: course 115. Designed for juniors/senior majors. Survey of current data and theory concerning how neuron circuits produce behavior. Mechanisms of perception, response selection, motor pattern formation, and learning, with emphasis on operation of these processes in well-defined neural circuits in animals and humans. P/NP or letter grading.


119I. Integration of Face and Brain. (4) Seminar, three hours. Requisite: courses 115 or M117C. Faces play major role in social interactions in both humans and nonhuman primates and in other animals as well. Exploration of neuroanatomical, neurophysiological, and neurofunctional underpinnings of face processing (attractiveness, emotional expressions, facial skin, identity recognition, based on empirical studies that use behavioral responses in neuroimaging techniques, in effects of types of physiological responses, and in psychopathological states. Discussion of evolutionary approaches to faces, as well as relationship between specific genetic mutations affecting both brain and facial appearance. P/NP or letter grading.
113J. Brain Bugs: Understanding Brain through its Flaws. (4) Lecture, three hours. Requisite: course 115 or M117C. Designed for juniors/seniors. Psychology of brain flaws and limitations to understand how brain works by studying what it does well and understanding neuroscience of why brain is poorly suited to perform some tasks such as numerical calculations, memorizing lists and names, and making unbiased decisions. Topics include memory (types of memory; false memories; repetition and memory; memory capacity) and cognitive biases (framing, anchoring, and temporal discounting). Exploration of underlying neural causes of brain flaws and limitations in context of brain's associative architecture. Basic neuroscience, synaptic plasticity, cortical plasticity, neural basis of learning and memory, and some computational neuroscience. P/NP or letter grading.

119C. Neurophilosophy. (4) Lecture, three hours. Requisite: course 115. Philosophy of mind has relied on introspection and thought experiments to explore consciousness, self, and free will. Field of neurophilosophy employs findings and methods of neuroscience to investigate these seemingly impenetrable constructs. Provides students with foundation in neuropsychology, which includes basic understanding of philosophical implications of phenomena including consciousness, volition, and self, and examination of scientific methods available for studying these phenomena. Exploration of student experiences of world and themselves within and demonstration of how alterations in brain functioning due to injury, psychedelic drugs, and dreaming result in alterations in these phenomena. P/NP or letter grading.

M119L. Human Neuropsychology. (Same as Neuroscience M119L.) Lecture, three hours. Requisite: courses 115 (or M117A and M117C), 120A or 120B. Designed for juniors/seniors. Survey of experimental and clinical human neuropsychology with a focus on neural basis of higher cognitive functions. P/NP or letter grading.

119M. Neural Circuits of Learning and Memory. (4) Lecture, three hours. Requisite: course 115. Designed for juniors/seniors. Introduction to classical and current literature on mechanisms of learning and memory from individual brain systems to circuits. P/NP or letter grading.

M119N. Visual System. (Same as Neuroscience M119N.) Lecture, three hours. Requisite: courses 115 or Neuroscience M101A or Physiological Science 111A. Ability to image and analyze visual world is truly remarkable feat. Coverage of anatomy and physiology of visual processing from retina to visual cortex through lectures, extensive reading, and presentations. P/NP or letter grading.

M119O. Psychology of Aging. (Same as Gerontology M119O.) Requisite: course 115. Designed for juniors/seniors. Exploration of developmental changes occurring at end stages of life. Some alterations that occur represent improvement, others are detrimental. Examination of impact of aging process on mental phenomena and exploration of ways in which positive changes can be maximally utilized and impact of detrimental alterations minimized. P/NP or letter grading.

119P. Emerging Topics in Neuroscience. (4) Lecture, two hours; discussion, one hour. Requisite: course 115. Emerging advanced lecture topics in neuroscience given by visiting speakers, with additional lectures by instructor on relevant background material. Reading of published scientific articles. P/NP or letter grading.

119Q. Psychobiology of Sleep and Dreams. (4) Lecture, three hours. Requisite: course 115. Designed for juniors/seniors. Survey of sleep neurobiology and comparison of sleep in mammals and submammalian species, circadian rhythms and circadian control of sleep, development and aging of sleep, neural and neurochemical mechanisms of sleep, effects of sleep deprivation, sleep in psychiatric disorders, human sleep disorders, and function of dreams. P/NP or letter grading.


119V. Brain and Art. (4) Lecture, three hours. Requisite: course 115. Multiple forms of art express uniqueness of human brain and mind. Discussion of neural underpinnings of art in artist and viewer and links to evolutionary, biological, aesthetic, cognitive, and social roots of art. P/NP or letter grading.

M119X. Biology and Behavioral Neuroscience of Aging. (Same as Gerontology M119X.) Lecture, three hours. Designed for juniors/seniors. Biologic mechanisms and neurochemical changes throughout age-related phase, and understanding of aging and death, have been increasingly studied in recent years. Establishment of what is known experimentally about biology and behavioral neuroscience of aging and evaluation of theories developed to account for this knowledge. P/NP or letter grading.

120A. Cognitive Psychology. (4) Lecture, three hours; discussion, one hour. Requisites: courses 10, 100A, 100B, 120A or 120B. Designed for juniors/seniors. Survey of cognitive psychology. Topics include representation, transform, and use verbal and nonverbal information. Perception, attention, imagery, memory, representation of knowledge, language, action, decision making, thinking, problem solving, creativity, and related topics. P/NP or letter grading.

120B. Sensation and Perception. (4) Lecture, three hours; discussion, one hour. Requisites: courses 10, 100A, 100B, 120A or 120B. Designed for juniors/seniors. Acquisition of information about physical world through basic sensory mechanisms and perceptual processes. Perception of objects, surfaces, space, motion, and events. Connections between information, computations, and biological mechanisms in vision, audition, and other systems. P/NP or letter grading.

121. Laboratory in Cognitive Psychology. (4) Laboratory, four hours. Requisites: courses 10, 100A, 100B, 120A or 120B. Designed for Psychology and Cognitive Science majors in conjunction with methods and phenomena from research on human perception, memory, and cognition. P/NP or letter grading.

124A. Advanced Topics in Sensation and Perception. (4) Lecture, three hours. Requisites: courses 10, 100A, 120A or 120B. Designed for juniors/seniors. Contemporary research and theory about visual and auditory perception. Topics include physiological mechanisms, computational models and models, and computational approaches. P/NP or letter grading.

124B. Visual Information Processing. (4) Lecture, two hours; discussion, one hour. Requisites: courses 10, 100A, 120A or 120B. Designed for seniors. Survey of visual information in visual system, such as storage and representation of visual information in memory, pattern recognition, and role of attention in visual processing, word and picture recognition, object perception, and imagery. Possible consideration of developmental aspects. P/NP or letter grading.

124C. Human Memory. (4) Lecture, two hours; discussion, one hour. Requisite: course 120A or 120B. Designed for juniors/seniors. Memory processes are central to research on basic processes and structural components that comprise the human memory system. Discussion topics include practical implications of such research for instruction, marketing, and witness testimony. P/NP or letter grading.

124D. Consciousness: Current Debates. (4) Seminar, three hours. Requisites: courses 100B, 115. Designed for juniors/seniors. Exploration of thinking in current issues in research on cognitive neuroscience of consciousness, with focus on modern theories of consciousness perception, especially in visual modality so as to reflect its dominance in consciousness research. P/NP or letter grading.

124E. Language and Cognition. (4) Lecture, three hours. Requisites: courses 10, and 120A or 120B. Designed for juniors/seniors. Recent theories of language and cognition; nature of categories, feedback, and error detection in language and cognition; modularity; ambiguity; knowledge acquisition; processes and representations underlying perception, production, attention, and awareness in language and cognition. P/NP or letter grading.

124F. Thinking. (4) Lecture, three hours. Requisite: course 120A or 120B. Analysis of experimental studies in human categorization, reasonings, decision making, problem solving, creativity, and related topics. P/NP or letter grading.

124J. Perception, Learning, and Learning Technology. (4) Seminar, three hours. Requisite: course 120A or 120B. Aspects of perception and cognition as they relate to learning and potential for learning technology. Basic knowledge about visual information processing, perceptual learning, knowledge representation, pattern recognition, and expertise, as well as research on learning, technology, and applications of perceptual and cognitive concepts in specific domains, with special focus on teaching and learning in mathematics. P/NP or letter grading.


125A. Developmental Psychopathology. (4) Seminar, three hours; fieldwork, seven hours. Research approaches utilized by psychologists in Fernald Research Intern Program to conduct research in developmental psychopathology in context of direct experience, interns provided with necessary background to undertake various research activities during Winter and Spring Quarters. P/NP grading.

125B. Research Methods in Developmental Psychopathology. (4) Laboratory. Three hours; fieldwork, seven hours. Limited to departmental majors. Research approaches utilized by psychologists to conduct research in developmental psychopathology. Letter grading.

125C. Advanced Research Methods in Developmental Psychopathology. (4) Laboratory. Three hours; fieldwork, seven hours. Limited to departmental majors. Advanced research approaches utilized by psychologists to conduct research in developmental psychopathology. Letter grading.

126. Clinical Psychology Laboratory. (4) Laboratory. Four hours. Requisites: courses 10, 100A, 100B, and 127A or 127B or 127C. Designed for departmental majors. Advanced methods and techniques in conduct of clinical psychology research. Students develop and conduct research. Content varies by ins...
131. Research in Developmental Psychology. (4) Discussion, one hour; laboratory, three hours. Requires: courses 10, 100A, 100B, and 130 or one course from 133A through 133H. Designed for Psychology and Cognitive Science majors. Forms of scientific writing; principles of data collection, analysis, and interpretation; special advantages and problems of asking developmental research questions; relevant methodologies for experimental and observational work; data analysis and data presentation options. Letter grading.

132A. Learning Problems, Schooling Problems: Policy and Practice. (4) Lecture, three hours. Designed for juniors/seniors. Exploration of different orientations and perspectives with learning problems, emphasizing assessment and intervention approaches and psychological impact of such approaches. Topics include interaction of learner and environment, sociopolitical, and cultural issues of schooling, grades, and evaluations, process versus goal focus in learning. P/N or letter grading.

132B. Mental Health in Schools: Policy and Practice. (4) Seminar, three hours. Limited to juniors/seniors. Policies, models, and mechanisms for mental health in schools. Psychopathology placed into a broader perspective of normal development and psychosocial problems to explore range of theoretical, practical, and ethical issues. Letter grading.

133A. Adolescent Development. (4) Lecture, three hours. Requires: courses 10, 100A. Examination of cognitive, social, physical, and physiological development of the adolescent. P/N or letter grading.

133B. Cognitive Development. (4) Lecture, three hours. Requires: courses 100A, 100B. Major theories, approaches, and issues in study of cognitive development. Readings include original research on important topics such as development of perception, language, thinking, and problem solving, and acquisition of concepts and domain-specific language. P/N or letter grading.

133C. Language Development. (4) Lecture, three hours. Requires: courses 100A, 100B. Application of principles of cognitive development, learning, and perception to study of language development. Topics include first and second language acquisition (sounds, meanings, grammatical structures), learning mechanisms, communication skills, and relation between language and thought in children. P/N or letter grading.

133D. Social and Personality Development. (4) Lecture, three hours. Requires: courses 100A, 100B. Theory and research on social and personality development during childhood. Topics include parent/child attachment, temperament, self-control, aggression, sexuality, socialization, and cultural and behavioral roles of perception, learning, and motivation in personality. P/N or letter grading.

133E. Perceptual Development. (4) Lecture, three hours. Requires: courses 100A, 100B. Topics include origins and development of human perceptual abilities, origins of knowledge about functionally important aspects of the environment, ecological and computational issues in perception, research and theory about initial perceptual capacities, and some sensory foundations. P/N or letter grading.

133F. Psychology and Education. (4) Lecture, three hours. Requires: courses 100A, 100B. Application of principles of cognitive development, learning, and perception to educational problems. Topics include general instructional issues, psychology of reading and mathematics, exceptional children, early childhood education, and education of the disadvantaged. P/N or letter grading.

133G. Culture and Human Development. (4) Lecture, three hours. Discussion, one hour. Requires: courses 100A, 100B. Role of culture in human development through psychology, anthropology, archaeology, and autobiography. Students relate material from lectures and readings, through empirical research projects, to diverse cultural backgrounds in class, at UCLA, and in the broader community. Letter grading.


133I. Applied Developmental Psychology: Infant/Toddler Care and Education. (4) Lecture, three hours. Designed for Applied Developmental Psychology minors. Coverage of children zero to three years old. Topics include physical, cognitive, social, and emotional development of children, developmentally appropriate practices, child care quality, role of educator/caregiver, and other related issues. Letter grading.

134A. Applied Developmental Psychology: Preschool/School-Age Care and Education. (4) Lecture, three hours. Designed for Applied Developmental Psychology minors. Coverage of children three to eight years old. Topics include physical, cognitive, social, and emotional development of children, developmentally appropriate practices, child care quality, role of educator/caregiver, and other related issues. Letter grading.


134C. Advanced Fieldwork in Applied Developmental Psychology. (2) Fieldwork, 86 hours per term. Enforced corequisite: course 134A. Designed for Applied Developmental Psychology minors. Fieldwork in applications of developmental psychology to support and illustrate, in applied setting, theories and research findings presented in lecture. P/N or letter grading.

134D. Infant Care and Development. (4) Lecture, three hours. Requires: course 10, one course from 130 or 133B through 133I, one statistics course. In-depth study of research findings and theories used to understand infant development from conception through second year of life, including cross-cultural application of this knowledge to various populations. P/N or letter grading.

134E. Early Childhood Curriculum. (4) Lecture, three hours. Requires: course 10, one course from 130 or 133B through 133I, one statistics course. Examination of methods, materials, and philosophies that enhance development of children in context of childcare settings. Topics include issues of multiculturalism, antibias curriculum, and special needs adaptations. P/N or letter grading.

134I. Child, Family, and Community. (4) Lecture, three hours. Requires: course 10, one course from 130 or 133B through 133I, one statistics course. Examination of role of early childhood educators within context of diverse racial, ethnic, economic, and cultural backgrounds and impact of these dynamics on children's development. P/N or letter grading.

135. Social Psychology. (4) Lecture, three hours; discussion, one hour. Requisites: courses 100A, 100B. Designed for juniors/seniors. Interrelationships between the individual and his social environment, social influences on motivation, perception, and behavior. Development and change of attitudes and opinions; psychological analysis of small groups; social stratification, and mass phenomena. P/N or letter grading.

136A. Social Psychology Laboratory. (4) Lecture, one hour; laboratory, four hours. Designed for Applied Developmental Psychology minors. Introduction to research designs and methods relevant to improving well-being of children and their families. Topics include quality of child care, patterns and ranges of normal child behaviors, developmental disabilities, safety, legal, and public policy issues, child-rearing practices. P/N or letter grading.
used to test social psychological hypothesis, including experiments, observation, content analysis, and/or questionnaires. P/NP or letter grading.

136B. Nonexperimental Methods in Social Psychology. (4) Lecture, two hours; laboratory, two hours. Requisites: courses 10, 100A, 100B, 135. Designed for Psychology majors. Research experience with nonexperimental methods for study of social attitudes or behavior, including fieldwork with survey research, naturalistic observation, or questionnaires. P/NP or letter grading.

136C. Survey Methods in Psychology. (4) Lecture, two hours; laboratory, three hours. Requisites: courses 10, 100A, 100B, 135. Designed for Psychology majors. Research in psychology with particular emphasis on surveys of social and political attitudes. Actual experience in systematic survey research such as that done by media polling agencies, market research companies, and academic survey research centers. Topics include survey design, sampling, interviewing techniques, response rates, questionnaire design, data coding, and analysis. Training in telephone interviewing techniques in laboratories. P/NP or letter grading.


137B. Nonverbal Communication and Body Language. (4) (Same as Communication M113.) Lecture, three hours. Examination of how various forms of nonverbal communication convey meaningful information to perceivers, with focus on both production and perception of multiple communication formats (e.g., affect expression of face and body, gesture, and kinematics), with strong emphasis on body language. Readings from a variety of related fields. P/NP or letter grading.

137C. Intimate Relationships. (4) Lecture, three hours. Requisites: courses 10, 100A. Limited to juniors/seniors. Introduction to how social scientists think about, study, and treat intimate relationships, with emphasis on understanding how relationships change over time. Topics include attraction, relationship formation, conflict resolution, social support, sex, role of individual differences, and external circumstances. P/NP or letter grading.

137D. Psychology of Diversity. (4) Lecture, three hours. Requisites: course 10. Designed for juniors/senior. Examination of how culture, socioeconomic class, ethnicity, gender, and other group differences are constructed, maintained, and studied. Emphasis on how scientific evidence informs approaches to contemporary problems including management of diverse workforce, immigrant integration, racial tension, and health/educational disparities. P/NP or letter grading.

137E. Work Behavior of Women and Men. (4) (Same as Gender Studies M137E.) Lecture, two and one half hours. Requisite: course 10 or Gender Studies 10. Designed for seniors. Examination of work behavior of women and men. Topics include accents of career choice, job findings, leadership, performance discrimination and evaluation bias, job satisfaction, and interdependence of work and family roles. P/NP or letter grading.

137F. Introduction to Sport Psychology. (4) Lecture, three hours. Designed for juniors/seniors. Survey of topics in sport psychology, including leadership and team dynamics, moral development and aggression, personality, motivation, fan behavior, and performance enhancement. Consideration of youth sport through written and oral methods. P/NP or letter grading.

137G. Social Cognitive Neuroscience. (4) Lecture, three hours. Principles of social cognitive neuroscience (SCN) and survey of broad array of topics in field. SCN is fundamental merging of social science and neuroscience methods, with particular emphasis on functional magnetic resonance imaging (fMRI). P/NP or letter grading.

137I. Interpersonal Influence and Social Power. (4) Lecture, three hours. Requisite: course 135. Theory and research focusing on how people influence one another and resist such influence, and on the bases of social power. Motivations and effects of influence for the three primary roles within social interactions: ascribed, initial, and dispositional roles. Three hours. Designed for juniors/seniors. Theory and research focusing on how people influence one another and resist such influence, and on the bases of social power. Motivations and effects of influence for the three primary roles within social interactions: ascribed, initial, and dispositional roles. Three hours. Designed for juniors/seniors.


138. Electoral Politics: Political Psychology. (4) (Same as Political Science M141A.) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 10. Designed for juniors/seniors. Examination of political behavior, political socialization, personality and politics, racial conflict, and psychological analysis of public opinion on these issues. P/NP or letter grading.

139. Perspectives on Autism and Neurodiversity. (4) Lecture, three hours; seminar, one and one half hours. Genealogy of autism as diagnostic category and cultural phenomenon from its historical roots as new, rare, and obscure condition in early 1940s to its current contested status as minority group. Examination paid to way people on spectrum define, explain, and put them in conversation with one another. Attention paid to how cosmopolitan, neurodivergence, and neurodiversity concepts are used to test social psychological hypothesis, in particular the perspective that can be elucidated by understanding of genetic contributions to cognition and behavior and disorders thereof. P/NP or letter grading.

140. Behavior and Brain Development. (4) Lecture, three hours. Requisites: courses 10, 100A, 100B, 135. Designed for seniors. Examination of how cognitive neuroscience can inform study of development and how developmental approach can advance progress in cognitive and developmental sciences. P/NP or letter grading.

142. Advanced Statistical Methods in Psychology (Honors, may be taken pass/fail; laboratory, two hours. Requisites: courses 100A, 100B. Survey of statistical techniques commonly used in psychology, education, and behavioral and social sciences. Examination of control, traditional techniques, analysis variance, and multiple regression. P/NP or letter grading.

144. Measurement and Its Applications. (4) (Same as Statistics M154.) Lecture, three hours. Requisites: course one from 100A, Statistics 10, 11, 12, 13, or 14. Selection of theories for quantification of psychological, educational, social, and behavioral science data. Classical test, factor analysis, generalizability, item response, optimal scaling, ordinal measurement, contemporary psychometrics, test theory, test construction, and measurement of tests and their reliability, validity, and bias. P/NP or letter grading.

147A. Psychology of Lesbian Experience. (4) (Same as Gender Studies M147A and Lesbian, Gay, Bisexual, Transgender, and Queer Studies M147A.) Lecture, two hours; discussion, one hour. Requisites: course 10 or Gender Studies 10 or Lesbian, Gay, Bisexual, Transgender, and Queer Studies 10. Designed for seniors. Review of research and theory in gender studies and psychology to examine various aspects of lesbian experience, impact of heterosexism, sexualization, minority status of women and lesbians, identity development within a multicultural society, changes in psychological theories about lesbians in sociocultural context. P/NP or letter grading.

148. Introduction to Health Psychology. (4) Lecture, three hours. Requisite: course 10. Areas of health, illness, treatment, and delivery of treatment that can be elucidated by understanding of psychological concepts and research, psychological perspectives on health, and decision-making. P/NP or letter grading.


152. Mind-Body Interactions. (4) Lecture, three hours. Designed for junior/senior Psychology and Psychobiology majors. Examination of bidirectional interactions between mind and body and how these interactions influence physical health. Topics include stress, emotions, personality, and social world on biological systems and health. Discussion of mind-body interventions designed to reduce stress and improve health, including scientific research on yoga and meditation. P/NP or letter grading.

160. Genetics of Human Cognition and Behavior. (4) Lecture, three hours. Requisites: courses 10, 100A, 100B, 125B, or 125B/125T. Survey of field of behavior genetics, including methods for determining genetic and environmental influences and for locating and characterizing genes influencing these traits, and implications of current knowledge of genetic contributions to cognition and behavior and disorders thereof. P/NP or letter grading.


M163. Death, Suicide, and Trauma. (4) (Same as Sociology M138.) Lecture, three hours; discussion, one hour. Sociological analyses of incidence and effects of violent death. Suicide is eighth leading cause of death in U.S. and third leading cause for young people aged 15 to 24. Both kinds of violent deaths are often dismissed as irrelevant to psychological and social work and family roles. Applications of suicide and homicide are social facts. Suicide and homicide do not occur randomly in society but are stratified according to social factors such as age, gender, race, sexual orientation, and class. Analysis of strength of this sociological argument and evaluation of explanatory potential of different theories to make sense of violent death, paying particular attention to forensic and medicolegal system to determine suicide and solve homicides. Review of historic and contemporary studies to examine how research and conceptualization of suicide and homicide have changed, as well as social responses to these phenomena. P/NP or letter grading.

164. Puberty and Sleep. (4) Lecture, three hours. Requisite: course 10 or Gender Studies 10. Exploration of how normative biological and hormonal changes during adolescence influence adolescent behavior and well-being. Focus specifically on puberty and sleep, which both lead to many subsequent effects on behavior, health, and brain development. P/NP or letter grading.

M165. Psychology of Gender. (4) (Same as Gender Studies M165S.) Lecture, three hours. Consideration of psychological theories of gender and understanding contemporary sex differences. Topics include sex-role development and role conflict, psychological and personality differences between men and women, sex
M166. Neurobiology of Bias and Discrimination. (4) Same as Neuroscience M167 and Psychological Science M166. Seminar; three hours; discussion, one hour. Limited to junior/senior neuroscience, physiological science, and psychology students. Exploration of aspects of mammalian brain function that generate preferences for, or prejudice against, members of different groups. Concepts, recent research at multiple levels of analysis from genetics to neural circuits to behavior. Discussion of societal implications of these research findings, including their relevance to public policies and criminal justice system. Letter grading.

M172. Afro-American Woman in U.S. (4) Same as African American Studies M172 and Gender Studies M172. Lecture, two and one half hours. Designed for juniors/seniors. Impact of social, psychological, political, and economic forces which impact on interpersonal relationships of Afro-American women as members of large social groups and as members of their biological and ethnic communities. P/NP or letter grading.

M174. Health Disparities. (Formerly numbered 174.) Same as Life Sciences M174. Lecture, three hours. Exploration of health disparities and ways in which societal responses to race and ethnicity in combination with various other factors create differential quality and access to healthcare resulting in poor health outcomes. Social/ethnic phenomena. Basic foundation for critical thinking about assumptions that shape life sciences, medical research, clinical practice, and social and behavioral sciences as they relate to racial and ethnic minority populations and to teach students to integrate concepts of culture and health disparities into other social, biological, political, psychological, genetic, and clinical health interests. P/NP or letter grading.

175. Community Psychology. (4) Designed for junior/senior Psychology majors. Application of psychological principles to understanding and solution of community problems. Topics include community development, mental health problems, drugs, racism, and rehabilitation of prisoners.

M176SL. Addressing Social Determinants in Racial/Ethnic Minority Communities to Reduce and Prevent Health Disparities. (4) Same as Civic Engagement M176SL. Seminar, two hours; fieldwork, 10 hours. Examination of how addressing social determinants in racial/ethnic minority communities can reduce or eliminate physical and mental health disparities. Currently in racial and ethnic minority communities, health status of individuals can be function of built environment, exposure to pollutants and toxins, scarcity of supermarkets or stores with fresh produce and unhealthy items, noise levels, and variety of other stressors and unhealthy conditions. Health interventions are often focused on individual-level changes or access to healthcare, with little in way of changing risk environments. Designed to identify and provide opportunities to understand how to address social determinants related to negative health outcomes within one’s neighborhood and communities and to experience how to use social determinants literature in service of collaborative activities with community organizations. P/NP or letter grading.

177. Counseling Relationships. (4) Lecture, two hours; discussion, two hours. Requisites: courses 10, 100A, and 127A or 127B or 127C. Designed for junior/senior Psychology majors. Conceptual and empirical foundations of psychological counseling; comparison of alternative models of counseling processes. Emphasis on counseling approaches in community mental health areas such as drug abuse, suicide prevention, and crisis intervention. P/NP or letter grading.

178. Human Motivation. (4) Lecture, three hours. Designed for juniors/seniors. Examination of theories of human motivation, experimental findings supporting the theories, and history of study of motivation. Topics include sociobiology, conflict, aspiration level, achievement strivings, and causal attributions.


179B. Biomedical and Psychosocial Aspects of AIDS/HIV. (4) Lecture, three hours. Requisite: course 150 or 179A or Health Policy 100. Designed for juniors/seniors. Basics of epidemiology of AIDS, routes of transmission, clinical characteristics of AIDS, neurological and psychosocial aspects of coping with HIV infection and AIDS. Presentation of biological, behavioral, and therapeutic interventions. P/NP or letter grading.

180A. Contemporary Problems in Developmental Disabilities. (Same as Psychiatry M180.) Seminar, three hours. Designed to support Developmental Disabilities Program students. Examination of broad spectrum of issues related to mental retardation, intelligence and IQ, genetics, neuropsychology, and other developmental disabilities. P/NP or letter grading.

M181A. Research in Contemporary Problems in Developmental Disabilities. (Same as Psychiatry M181A.) Lecture, one hour; laboratory, eight hours. Corequisite: course M180. Limited to Developmental Disabilities Program students. Research experience. In Progress grading (credit to be given only on completion of course M181B).


184A-184B. Psychology Research Opportunity Program Seminars. (2-2) Seminar, 90 minutes. Designed to bring together Psychology Research Opportunity Program (ROP) students undertaking supervised tutorial research in seminar setting with one or more faculty members to discuss their own work or related work in discipline. Led by one supervising faculty member. P/NP or letter grading.

185. Research Practicum in Psychology. (3) Laboratory, seven hours. Corequisite: course C194D. Limited to juniors/seniors. Practical applications of psychology through research under guidance of faculty mentor. Only 12 units from any combination of courses 185, 192, 194, 195, and 196 may be applied toward undergraduate degree. May not be applied toward course requirements for any Psychology Department major. Individual contract required. Information and contracts may be obtained from Undergraduate Advising Office, 1531 Franz Hall. P/NP grading.

186A. Cognitive Science Laboratory: Introduction to Theory and Simulation. (4) Laboratory, four hours. Requisites: courses 8, 10, 100A, 100B, Program in Computing 10A, 10B. Designed for junior/senior departmental majors. Models of cognition within broad domains of human cognition (e.g., visual perception, categorization, learning, reasoning, and problem solving). Types of models include neural networks and symbolic knowledge representation and computation using computer simulations written in Matlab. P/NP or letter grading.


186C. Cognitive Science Laboratory: Psychophysical Theories and Methods. (4) Lecture, two hours; laboratory, two hours. Requisites: courses 10, 85, 100A, 100B. Designed for junior/senior departmental majors. Lectures and laboratory work that examine perceptual measurement procedures (psychophysical methods) and cognitive processing and decision models on which procedures are based, with particular emphasis on signal detection theory and its applications. Letter grading.

186D. Laboratory in Functional Neuroimaging. (4) Laboratory, four hours. Enforced requisites: courses 10, 100A, 100B. Limited to departmental majors. Introduction to study of brain with functional resonance imaging (fMRI). All major aspects to be discussed, from physical basis of MR signal to data analysis. Letter grading.

187A. Psychology and Law. (4) Lecture, two hours; discussion, two hours. Designed for juniors/seniors. Study of new topics on legal psychology, including suspects’ identification; eyewitness testimony, lying; police procedures. Outside users utilized in presentation of these materials. Students participate in presentations and/or discussions.

187B. Advanced Psychology and Law. (4) Lecture, three hours; discussion, one hour. Requisite: course 187A. Designed for juniors/seniors. Study of additional topics on legal psychology, including gang violence, theories of crime, corrections, repeat offenders, community policing, and interrogation. Outside users utilized in presentation of these materials. P/NP or letter grading.

187C. Sex and Law. (4) Lecture, three hours. Designed for juniors/seniors. Examination of Constitutional foundation for sexual rights in America, with focus on freedom of speech and press, right to privacy, and Ninth Amendment rights reserved by the people. P/NP or letter grading.

188A. Special Seminars: Psychology. (4) Seminar, three hours. Limited to juniors/seniors. Departmentally sponsored experimental or temporary seminars on selected topics in psychology, such as those taught by visiting faculty members, with discussion, seminar, and discussion of culminating project. May be repeated for credit. P/NP or letter grading.

188B. Special Courses in Psychology. (4) Lecture, three hours. Designed for Departmentally sponsored experimental or temporary courses on topics of psychological interest, such as those taught by visiting faculty members. Consult Schedule of Classes for topics and instructors. May be repeated for credit. P/NP or letter grading.

190. Research Colloquia in Psychology. (1) Seminar, one hour. Designed to bring together students undertaking supervised tutorial research in seminar setting with one or more faculty members to discuss their own work or related work in discipline. Led by one supervising faculty member. May be repeated for credit. P/NP or letter grading.

191. Variable Topics Research Seminars: Psychology. (1-10) One hour. Limited to juniors/seniors. Research seminar on selected topics in psychology. Reading, discussion, and development of culminating project. May be repeated for credit. P/NP or letter grading.

191B-191CH. Departmental Honors Research Seminars. (2-2) Seminar, two hours. Enforced corequisite: course 198. Course 191AH is required to 191CH. Limited to juniors/seniors. Laboratory opportunities for development and analysis of creative ideas through individual research projects with faculty sponsor and discussion of student and faculty research. Consult Undergraduate Advising Office, 1531 Franz Hall. If approved in advance by Under-
obtained from Undergraduate Advising Office, 1531 Franz Hall. P/NP grading.

195B. Corporate Internships in Cognitive Science. (4) Tutorial, eight hours. Limited to junior/senior Cognitive Science majors. Practical applications of cogni-
tive science through internship experience in super-
visory settings with university supervisor and provide periodic reports of their experi-
ence. Only 12 units from any combination of courses 185, 192, 194, 195, and 196 may be applied toward undergraduate degree. May be applied toward course requirements for Cognitive Science major. In-
dividual contract required. Information and contracts may be obtained from Undergraduate Advising Office, 1531 Franz Hall. P/NP grading.

196A. Research Apprenticeship in Psychology. (3 to 4) Tutorial, eight hours. Corequisite: course 194A. Limited to juniors/seniors. Practical applications of psychology through research under guidance of faculty
member. Only 12 units from any combination of courses 185, 192, 194, 195, and 196 may be applied toward undergraduate degree. May not be applied toward course require-
ments for any Psychology Department major. Individual contract required. Information and contracts may be obtained from Undergraduate Advising Office, 1531 Franz Hall. P/NP grading.

196B. Research Apprenticeship in Cognitive Science. (3 to 4) Tutorial, eight hours. Corequisite: course 194C. Limited to junior/senior Cognitive Science majors. Practical applications of cognitive sci-
ence through research under guidance of faculty member. Only 12 units from any combination of courses 185, 192, 194, 195, and 196 may be applied toward undergraduate degree. May be applied toward course requirements for Cognitive Science major. Indi-
vidual contract required. Information and contracts may be obtained from Undergraduate Advising Office, 1531 Franz Hall. P/NP grading.

196C. Senior Project in Psychology. (4) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research under guidance of psychology faculty mentor. Capstone paper required. May be repeated for credit. Individual contract required. Information and contracts may be ob-
tained from Undergraduate Advising Office, 1531 Franz Hall. Letter grading.

199A. Senior Project in Psychology. (4) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research under guidance of psychology faculty mentor. Capstone paper required. May be repeated for credit. Individual contract required. Information and contracts may be obtained from Undergraduate Advising Office, 1531 Franz Hall. Letter grading.

199B. Senior Project in Psychology. (4) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research under guidance of psychology faculty mentor. Capstone paper required. May be repeated for credit. Individual contract required. Information and contracts may be obtained from Undergraduate Advising Office, 1531 Franz Hall. Letter grading.

Graduate Courses

200A. Pavlovian Processes. (4) Lecture, three hours. Preparation: graduate psychology. Principles of learning and behavior, including Pavlovian conditioning, instru-
mental learning, and models of behavior of animals. May not be applied toward course requirements for any Psychology Department major. Individual con-
tract with supervising placement sponsor required. Information and contracts may be obtained from Undergraduate Advising Office, 1531 Franz Hall. P/NP grading.

200B. Instrumental Conditioning. (4) Lecture, three hours. Topics include animal learning and condi-
tional reinforcement. Principles of operant conditioning, direct action, motivational processes, and goal se-
lection in nonhuman animals. S/U or letter grading.

200C. Representational Processes. (4) Lecture, three hours. Preparation: graduate psychology. Principles of learning and behavior, including Pavlovian conditioning, instru-
mental learning, and models of behavior of animals. May not be applied toward course requirements for any Psychology Department major. Individual contract
with supervising placement sponsor required. Information and contracts may be obtained from Undergraduate Advising Office, 1531 Franz Hall. P/NP grading.

201. Current Issues in Learning and Behavior. (1) Discussion, 90 minutes. Required of learning and behavior students a minimum of four times (entire first year and winter of second year). Preparation of papers of current in-
terests, their presentation and oral analysis by experts in the field. Evaluation of their signifi-
cance and methodology in detail. May be repeated for credit. S/U grading.

202. Research in Learning and Behavior. (2) Forum in which graduate students discuss the literature and methodology, analytical, and interpretational issues related to specific topics of research in learning and behavior. S/U grading.

204A. Basic Motivational Processes. (4) Lecture, three hours. Required of graduate students. Analy-

sis, using behavioral systems approach, of basic motivated behavior such as feeding, drinking, for-
aging, and reproduction. Same approach also applied to other motivated behaviors such as rein-
forcement, and drug addiction. Historical survey of behavioral analyses of motivation and goal-directed behavior. S/U or letter grading.

204D. Fear and Anxiety. (4) Lecture, three hours. Preparation: graduate psychology. Lectures and discus-
sion on current research in appli-
cations of learning, principles to clinical and social problems such as alcohol and drug abuse, aggres-
sion, fear management, mental retardation, behavioral
deficits. S/U or letter grading.

205A. Cortical Plasticity and Perceptual Learning. (2) Lecture, three hours. Required of graduate stu-
dents. Examination of medial aspects of perceptual learning. Overview of literature on cortical plas-
ticity and related aspects of higher order perceptual learning in visual, auditory, and somatosensory
modalities. Review of mechanisms of cortical plasticity, including basic features of long-term synaptic plas-
ticity and computational models of cortical pro-
cessing. Letter grading.

205B. Human Neurophysiology. (2) Lecture, three hours. Required of graduate students. Examination of higher cognitive processes in terms of neural mechanisms that underlie them. Topics include cor-
tical modularity and organization, coordinated sen-
sory representation, language, regional functional specialization, attention, and regulation of cortical function by extracortical systems. Letter grading.

205C. Neurotransmitters in Human Disorders of Motor and Cognitive Function. (2) Lecture, three hours. Required of graduate students. Detailed anal-
ysis of molecules involved in neurotransmission and communi-
cation processes (i.e., neurotransmitters, neurope-
romones, “neuromodulators,” neurotropic agents). Dis-
cussion of their role in normal brain physiology, followed by detailed analyses of the mechanisms of action in various disease states. Particular emphasis on current and past thinking about Alzheimer’s disease, Parkin-
sionism, Huntington’s disease, and Down’s syndrome dementia. Letter grading.

205D. Clinical Psychopharmacology. (2) Lecture, three hours. Required of graduate students. General principles of brain neurotransmitters, including syn-

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M222E. Individuals and Groups in Organizations. (4) (Same as Management M250A.) Lecture, three hours. Designed for graduate students. Doctoral-level survey of classic and emerging theories and research in the field of organizational behavior, with focus on micro-level topics related to individual and interpersonal processes within organizations. Exploration of how individual behaviors, cognitions, and perceptions are affected by organizational context, structure, and culture. S/U or letter grading.

222F. Professional Issues in Psychology. (4) Seminar, three hours. Acquisition of skills essential for success in graduate school and academia more broadly, including writing, oral presentations, scholarship and grant writing, and mentoring. Preparation: one prior course on gender/sexuality issues and topics in social psychology. S/U or letter grading.

222G. Social Vision. (4) Seminar, three hours. Exploration of nascent field of social vision, with emphasis on how observers utilize visible cues in face and body and to form impressions of other people and how these perceptions are moderated by existing knowledge structures and motivations. S/U or letter grading.


226A-226B-226C. Current Literature in Social Psychology. (2-2-2) Discussion, 90 minutes. Course 226A is limited to first-year social psychology students. Courses 226B and 226C are open to nonsocial psychology students with consent of instructor. Recent and current research papers in social psychology presented by members of seminar and their significance. Methodology discussed and criticized in depth. S/U grading.

M228A. Proseminar: Political Psychology. (4) (Same as History M238A and Political Science M261A.) Seminar, three hours. Introduction to political psychology: psychobiography, personality and politics, mass attitudes, goal conflict, political communication, and elite decision making.

M228B. Seminar: Political Psychology. (4) (Same as Political Science M261D.) Discussion, three hours. Requisite: course 226A or Political Science M261A. Examination of political behavior, political socialization, racial conflict, mass political movements, and public opinion. S/U or letter grading.

M229. Critical Problems in Political Psychology. (4) (Same as Political Science M261E.) Discussion, three hours. S/U or letter grading.

229. Social Cognition. (4) Lecture, one hour; discussion, two hours. Social cognition is concerned with how people organize and interpret social information in their environment. Seminar provides broad background in the field and also gives depth and focus on particular research topics in the field. Weekly papers, as well as a final paper, required.

231. Psychology of Gender. (4) Seminar, three hours. Preparation: one prior course on gender/women's studies. Critical evaluation of current research and theory concerning psychology of gender, drawing on work from various areas of psychology to understand sources of gender differentiation and its consequences for human behavior and social interaction.

232. Human Sexuality. (4) Lecture, three hours. Designed for graduate students. Intended to teach students how to carry out research on human sexual behavior. Contents include theory construction, scale development, factor analysis, and endocrinological implications, radiimunooassay (measuring hormones in blood sample), ethical issues, methodological and statistical considerations, measurement of sexual arousal, and clinical dysfunction theory. Discussion-oriented, with emphasis on operationalizing predictions concerning human sexual functioning.

233. Seminar: Environmental Psychology. (4) Requisites: courses 235, 250A, 250B. Critical review of work in environmental psychology designed to identify basic dimensions for analysis of man/environment relationships. Use of human emotional responses to environments as intervening variables linking specific stimulus qualities to a variety of approach-avoidance behaviors. Individual differences and drug-induced states as these relate to emotional response dimensions used to explain within-individual differences in response to same environment over time or between-individual differences to same situation. Review of literature relating information rate from environments to arousal and preferences for those environments.

234. Social Psychological Aspects of Competitive Youth Sport. (4) Review of research concerning social psychological aspects of competitive sport for children. Sport is presented as a major achievement domain for young participants. Topics include sources and consequences of competitive stress, significant adult influences and interactions, predictors of performance, determinants of participation and dropping out, and socialization through sport.


M236. Interdisciplinary Relationship Science. (4) (Same as Anthropology M295S, Education M297, and Sociology M270.) Lecture, three hours. Limited to graduate students. Diverse approaches to relationship science in the fields of psychology, education, psychology, and sociology. Focus on theme of understanding biological, behavioral, and cultural aspects of relationships through diverse theoretical and methodological approaches. Use of broad definition of interpersonal relationships, including relationships such as parent-child, teacher-student, sibling, peer, kin, romantic relationships, marriages, and friendships. S/U or letter grading.

M238. Survey Research Techniques in Psychocultural Studies. (4) (Same as Psychiatry M238.) Seminar, three hours. Designed for graduate students. Techniques for conceptualizing, conducting, and analyzing survey data; instruction in qualitative strategies for enhancing survey research on psychocultural problems.

M239. Personality, Motivation, and Attribution. (4) (Same as Education M221.) Lecture, three hours. Current research and theory relating personality variables (e.g., attributional styles, self-esteem) to motivational concerns such as persistence and intensity of behavior. Perceived outcomes of achievement and affective domains. S/U or letter grading.

240A. Language and Cognitive Development. (4) Lecture, three hours. Preparation: one undergraduate developmental psychology course in cognitive or language development. Designed for graduate students. Consideration of major topics and concepts, key theories, latest methods, and research findings in development of language and cognition. S/U or letter grading.

240B. Social and Emotional Development. (4) Lecture, three hours. Preparation: one undergraduate developmental psychology course in social or emotional development. Designed for graduate students. Consideration of major topics and concepts, key theories, latest methods, and research findings in social and emotional development. S/U or letter grading.

240G. Developmental Psychobiology. (4) Lecture, three hours. Limited to graduate students. Introduction to emerging field of developmental psychobiology, including cognitive and affective neuroscience. Consideration of key theories, latest methods, and research findings in social and emotional development. S/U or letter grading.

241. Current Developments in Developmental Psychology. (1) Discussion, 90 minutes. Designed for graduate developmental psychology students. Presentation of papers on current advances in developmental psychology and closely related areas by experts in the field. Emphasis on approaches to a problem, making it suitable for interactive presentations by graduate students. S/U grading.

242A-M242G. Seminars: Developmental Psychology. (4 each) Each course may be taken independently and may be repeated for credit. S/U grading.

242A. Perceptual Development. (4) Seminar, three hours. Requisites: courses 240A, 240B. May be taken independently and may be repeated for credit. S/U or letter grading.

242B. Cognitive Development. (4) Seminar, three hours. Requisites: courses 240A, 240B. May be taken independently and may be repeated for credit. S/U or letter grading.

242C. Socialization. (4) Seminar, three hours. Requisites: courses 240A, 240B. May be taken independently and may be repeated for credit. S/U or letter grading.

242F. Development of Language and Communication. (4) Seminar, three hours. Requisites: courses 240A, 240B. May be taken independently and may be repeated for credit. S/U or letter grading.

242G. Adolescent Development. (4) (Same as Education M217F.) Seminar, four hours. Designed for graduate students. Review of recent research on physical, cognitive, social, and emotional development during second decade of life. Topics include pubertal development, changes in adolescent, relationships, role of peers, identity development, high-risk behaviors, school and coping, and school adjustment. Letter grading.

243A-243B. Seminars: Practical and Societal Issues in Developmental Psychology. (4-4) Seminar, three hours. Requisites: courses 240A, 240B. Socialization processes in human development and implication for social/political, educational, research issues, values, and societal change. In Progress (243A) and S/U or letter (243B) grading.

244. Critical Problems in Developmental Psychology. (4) Lecture, three hours. Requisites: courses 240A, 240B. Current problems; content varies depending on interest of class and instructor. May be repeated for credit with consent of instructor.

M245. Personality Development and Education. (4) (Same as Education M217C.) Lecture, four hours. Review of research and theory of critical content areas in personality development that bear on school performance: achievement, motivation, self-concept, aggression, sex differences, empathy, and other social behaviors; review of status of emotional behavior in personality theory and development. S/U or letter grading.

M246. Psychological Aspects of Mental Retardation. (4) (Same as Psychiatry M246.) Lecture, 90 minutes. Discussion of psychological aspects of mental retardation, including classification, description, etiology, theory, prevention, treatment, assessment, modern and future developments, and input from other disciplines (ethics, law, religion, welfare systems). S/U or letter grading.

M250A. Advanced Behavioral Statistics. (4) Review of fundamental concepts. Basic statistical techniques as applied to design and interpretation of experimental and observational research.

M250B. Advanced Psychological Statistics. (4) Advanced experimental design and planning of investigations.

M250C. Advanced Psychological Statistics. (4) Lecture, three hours; discussion, two hours. Requisite: course 250A. Limited to graduate students. Review of novel topics in correlation and regression analysis, including model comparison strategies, evaluation of model assumptions, testing mediation and moderation hypotheses, working with categorical variables, general linear model, and logistic regression. Letter grading.

251A-251B-251C. Research Methods. (4-4-4) Tutorials, to be arranged. Designed for graduate psychology students. Design and conduct original research projects under supervision of instructor in charge. It is anticipated that many students will...
complete their project in two terms (normally three terms allowed). S/U (251A, 251B) and S/U or letter (251C) grading.


252B. Discrete Multivariate Analysis. (4) Lecture, three hours. Requisites: courses 250A, 250B. Introduction to discrete multivariate data analysis. Topics include categorical univariate and multivariate distributions, independence and conditional independence, log-linear models, multivariate categorical designs, and ordered categorical variables. Applications from various areas of psychology.


254A. Computing Methods for Psychology. (4) Lecture, three hours. Requisites: courses 250A, 250B. Use of MATLAB programming knowledge assumed; no prior knowledge of MATLAB required. Designed to teach basic computer methods relevant to work in experimental psychology and cognitive science. Includes simulation of data generation, statistical data analysis, and stimulus presentation. S/U or letter grading.

255A. Quantitative Assessment. (4) Lecture, four hours. Requisites: courses 250A, 250B. Introductory course in issues concerning empirical measurement of abstract constructs using both classical and modern empirical techniques. Hands-on approach allows students to develop practical experience. In addition to covering all major issues concerning reliability and validity, topics include exposure to analytic approaches, including item response theory, multiple regression, principal components analysis, exploratory factor analysis, confirmatory factor analysis, path analysis, and structural equation modeling. S/U or letter grading.


256A. Introduction to Multilevel Modeling. (4) Lecture, four hours. Requisite: course 250C. Basics of random coefficient models for analysis of data from (1) individuals nested within groups and (2) repeated observations of individuals (longitudinal growth models). Selected advanced topics, including three-level models, cross-classification, dyadic data, categorical outcomes, power, and assumption violation. S/U or letter grading.

256B. Advanced Multilevel Modeling. (4) Lecture, four hours. Requisite: course 256A. Advanced topics in analysis of clustered and longitudinal data, including nonlinear models, multilevel mediation, non-erarchical data structures, meta-analysis, modeling variance, and other topics of student interest. Readings in both quantitative and substantive multilevel modeling literature. S/U or letter grading.

M257. Multivariate Analysis with Latent Variables. (4) (Same as Political Science M208D and Statistics M242) Lecture, three hours. Introduction to models and methods for analysis of data hypothesized to be generated by unmeasured latent variables, including latent variable analogues of traditional methods in multivariate analysis. Causal modeling: theory testing via analysis of moment structures. Measurement models such as factor analytic, higher-order, and structured-mixed factor analytic models. Structural equation models, including path and simultaneous equation models. Parameter estimation, hypothesis testing, and other statistical issues. Computer implementation. Applications. S/U or letter grading.


259. Quantitative Methods in Cognitive Psychology. (4) Requisites: courses 250A, 250B. Number of nonstatistical mathematical methods and techniques commonly used in psychological research. Topics include Markov chains, other stochastic processes, queueing theory, information theory, frequency analysis, etc.

260A-260B. Proseminars in Cognitive Psychology (1-1-1) Presentation of research topics by students, faculty, and visiting scholars. May be repeated for credit. S/U grading.

261. Perception. (4) Lecture, three hours. Concepts, theories, and research in study of perception. Considers the questions: Why do things look, sound, smell, taste, or feel as they do? What is the nature of perceptual systems? How do these systems process information?


266A-266E. Seminars: Human Information Processing. (4 each) Seminar, three hours. Topics vary with interest of instructor. Each course may be taken independently and may be repeated for credit. 266A. Perception. 266B. Human Learning and Memory. 266C. Judgment and Decision Processes. 266D. Language and Cognition. 266E. Human Performance.

268F. Human-Computer Interaction. (4) Lecture, three hours. Limited to graduate students. Concepts, theories, and pragmatics of human-computer interaction. Topics include optimizing Web and product interfaces to enhance quality of user experience, with focus on applying principles of design, perception, learning, and memory to create human-computer interactions that are consonant with user needs and capabilities. Course projects include creating and user testing actual Web-based application. S/U or letter grading.

269. Seminar: Cognitive Psychology. (4) Seminar, three hours. Discussion of problems in cognitive psychology that encompass more than a single subfield of the area. May be repeated for credit.

270A-270B-270C. Foundations of Clinical Psychology. (4-4-4) Lecture, five hours. Designed for graduate clinical psychology students. Letter grading.

270A. Corequisite: course 271A. Analysis of phenomenological, theoretical, and research issues regarding etiology and mediating mechanisms in neurotic, affective, schizophrenic spectrum, and other personality disturbances. 270B. Corequisite: course 271B. Principles and methods of psychological assessment and evaluation. 270C. Corequisite: course 271C. Principles and methods of psychological intervention in individuals, families, and community settings.


271D. Clinical Research Laboratory. (2) Seminar, one hour; laboratory, one hour. Corequisites: courses 270A or 270B or 270C, and 271A or 271B or 271C. Designed for graduate clinical psychology students. Acquaints students with faculty research interests and involves them in the design and conduct of research at an early stage to insure completion. S/U grading.

271E-271F. Clinical Research Laboratories. (2-2) Requisite: course 271D. Designed for graduate clinical psychology students. Required of first-year clinical psychology students. 271E. Brief overview of research design issued in clinical psychology and practical issues in students’ own research activities. 271F. Discussions of students’ particular research activities and issues, plus laboratories in computer analysis of statistical data.

271G. Evidence-Based Intervention for Childhood Problems. (4) Fieldwork, five-day, 35-hour training seminar. 271A. Corequisites: courses 271A, 271B, 271C. Designed for second-year graduate clinical psychology students. Training of students in application of (1) child treatment outcome literature, (2) clinical monitoring and feedback tools, and (3) common clinical strategies from evidence-based practices to prepare for assessment, monitoring, planning, and service delivery in child psychiatry. S/U grading.

272A-272G. Advanced Clinical Psychological Methods. (4 each) Each course may be taken independently for credit. Letter grading.


272C. Clinical Interventions for Psychological Problems of Children. (4) Seminar, three hours. Requisites or corequisites: course 401 or 451. May be taken independently for credit. Letter grading.

272D. Family Therapy and Research. (4) Seminar, three hours. Requisites: courses 270A, 270B, 270C. Survey of major schools of family therapy and how each applies to specific clinical emphasis on depression, bipolar disorder, and schizophrenia. Discussion of areas of research that relate to family theories, modes of assessment, and specific interventions. May be taken independently for credit. Letter grading.

272E. Special Problems. (4) Seminar, three hours. Requisite or corequisite: course 401 or 451. May be taken independently for credit. Letter grading.

272F. Behavior Modification with Adults. (4) Seminar, three hours. Requisite or corequisite: course 401 or 451. Designed for second-year graduate clinical psychology students. Current cognitive behavior modification research and treatment issues; specific techniques demonstrated and practiced by students to cover a range of adult problems.
such as depression, stress and anxiety, anger management, assessment problems. May be taken independently for credit. Letter grading.


273A-273B-273C. Professional and Ethical Issues in Clinical Psychology. (2-2-2) Lecture, one hour; discussion, one hour. Limited to graduate psychology students. Year-long course sequence covering varying topics necessary for clinical psychologists in their clinical work, including legal and ethical issues, child abuse, suicide, assessment issues in empirically validated treatments, psychiatric consultation and psychoactive medications, working with diverse client populations, etc. Letter grading.

M274. Health Status and Health Behaviors of Racial and Ethnic Minorities. (4) (Same as Health Policy and Management M274.) Lecture, two hours; discussion, one hour. Limited to graduate students. Overview of physical and mental health behaviors and status of major racial/ethnic groups in U.S. Where appropriate, discussion of international issues as well. S/U or letter grading.

275. Conceptual and Methodological Issues in Community Intervention. (4) Lecture, three hours. Limited to graduate students. Conceptualization of social problems from macrosocial perspective; discussion of multidisciplinary explanatory models for select illustrative problems; discussion and critical evaluation of both individual-focused and community-focused interventions with high-risk and impacted populations. S/U or letter grading.


277A-277B. Advanced Clinical Assessment. (4-4) (Formerly numbered 277.) Lecture, four hours; laboratory, two hours. Preparation for graduate clinical psychology students. Projective techniques, clinical interpretation, case studies, psychological test battery, psychopathology, and application of assessment to problems in psychotherapy. Letter grading.

M278. Functional Neuroimaging: Techniques and Applications. (3) (Same as Bioengineering M284, Neuroscience M285, Physics and Biology in Medicine M285, and Psychiatry M285.) Lecture, three hours. In-depth examination of activation imaging, including MRI and electrophysiological methods, data acquisition and analysis, experimental design, and results obtained thus far in human systems. Strong focus on understanding technologies, how to design activation imaging paradigms, and how to interpret results. Laboratory visits and design and implementation of functionally specific experimental and letter grading.


M280. Affective Disorders. (2 or 4) (Same as Psychiatry M234.) Seminar, two hours. General topics related to primary affective disorders (depression, mania, depressive illness), including diagnosis, pharmacology, epidemiology, psychology, phenomenology, biology, and treatment. Students enrolled for 4 units are assigned a more intensive reading list and requirement to make a presentation or prepare a research paper. S/U or letter grading.


M288A-M288B. Principles of Neuroimaging I, II. (4-4) (Same as Neuroscience M288A and Psychiatry M288A-M288B.) Lecture, four hours and one half hours. Preparation: competence in integral calculus, electricity and magnetism, computer programming (any language), general statistics. Requisite: Psychopharmacology 292. Course M288A is required to M288B. Instrumental imaging methods for study of nervous system, with emphasis on quantitative understanding and data interpretation and features common to modalities. X-ray computed tomography, magnetic resonance imaging, positron emission tomography, magnetic tomocapigraphy, transcranial magnetic stimulation, etc. (4-4) S/U grading.

289A-289B-289C. Current Issues in Clinical Psychology. (1-1-1) Seminar, two hours. Designed for first-year graduate clinical psychology students. Presentation of research and applied topics relevant to clinical psychology. In Progress (289A, 289B) and S/U (289C) grading.

290. History and Systems of Psychology. (2) Seminar, two hours. Requisites: courses 251A, 251B, 251C. Rich and detailed examination of history of psychology as discipline, with particular emphasis on cognitive, social/personality, developmental, and biological aspects of discipline. Broad treatment of how behavior within broader field have evolved. S/U or letter grading.


292. Biobehavioral Mechanisms of Stress and Disease. (4) Lecture, three hours. Designed for graduate psychology students. Behavior/physiology interactions of some major bodily systems: nervous, cardiovascular, gastrointestinal, and endocrine systems. Usual and altered states of these systems (e.g., stress) as these can promote permanent tissue injuries, disease, or improved bodily function, health enhancement. S/U or letter grading.

292B. Psychosocial Contributors to Ethnic Disparities in Health. (4) Seminar, three hours. Limited to graduate students. Advanced discussion of psychosocial factors in accounting for disparities in physical and psychological health in racial/ethnic groups. Attention to variety of specific disorders, with focus on appropriate models and approaches to intervention. S/U or letter grading.


295. Psychology of Diversity. (4) Seminar, three hours. Introduction to research and theory on group differences and psychology of diversity. Topics include social identity, intergroup relations, development across lifespan and across social and cultural contexts, and group disparities in health and mental health. Letter grading.

296. Research Topics in Psychology. (1) Research group meeting, one hour. Limited to graduate students. Discussion of current literature, new ideas, methodological issues, and issues in psychology. Research presentations and opportunities for feedback on current and proposed research activity to encourage, support, and facilitate student research experience. Assigned reading and required for credit. S/U grading.

296B. Research Group Seminars: Practicum. (1) Seminar, one hour. Designed for graduate students who are part of research group that meets with under-graduate students. Discussion of research methods and current literature in field or of research of faculty members or students. Concurrently scheduled with course 2194D. S/U grading.

298. Special Problems in Psychology. (4) Discussion, three hours. Content depends on interests of particular instructor. May be repeated for credit. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

401. Fieldwork in Clinical Psychology. (1 to 12) Fieldwork, to be arranged. Requisites: courses 271A, 271B, 271C. Students on practicum assignments are required to register for this course each term (except when pursuant of clinical program committee). Letter grading.

402. Clinical Research Practicum. (2) Fieldwork, two hours. Faculty and graduate students who share interests discuss current new ideas, methodological issues, and preliminary findings. Meetings include presentation and opportunities for feedback on current and proposed research activity to encourage, support, and facilitate student research expertise. Assigned reading included. S/U grading.

403. Special Topics Study Course. (1 to 4) Discussion, one to four hours. Under faculty supervision, group of students meets each week for quarter in self-directed study group to pursue specific topic of their interest that is not covered in other department courses. S/U grading.

410A-410B-410C. Clinical Teaching and Supervision. (4) Clinic, four hours. Preparation; comprehensive examination. Preparation for candidacy or development for dissertation research active under way. Study and practice of knowledge, concepts, and theories on teaching and supervision of applied clinical psychology. Letter grading.
410D-410E-410F. Clinical Assessment Supervision. (4-4-4) Clinic, two hours; other, one hour. Designed for third-year graduate clinical psychology students. Study and practice of knowledge, concepts, and theories on teaching and supervision of psychological assessment. Letter grading.

420A-420B. Health Psychology Practicum. (2-2) Fieldwork, to be arranged. Designed for graduate students. Determination of what areas of health, illness, treatment, and delivery of treatment can be elucidated by understanding of psychological concepts and research; psychological perspective on these problems; how psychological perspective might be enlarged and extended in medical area. Through practical field placement, students apply knowledge acquired in class to research observation and/or clinical work in field. S/U or letter grading.

421. Research in Social Psychology. (2) Discussion, two hours; reading and group work, four to six hours. Forum for faculty and graduate students pursuing research on a common topic to share research ideas, make research presentations, and obtain feedback on study design and procedures, and results to foster collaborative investigations in common research areas. S/U grading.

423. Social Survey Research Practicum. (4) Practicum, two hours; additional hours to be arranged. Methods of survey sampling, conduct and management of computer-assisted telephone interview surveys. S/U or letter grading.

425. Health Psychology Lecture Series. (2) Lecture, one hour. Clinicians and researchers in health psychology from Los Angeles area present their research, programs, and/or clinical work as part of training program in health psychology. May be repeated for credit. S/U grading.


454. Internship in Industrial Psychology. (2 to 4) Fieldwork, to be arranged. S/U or letter grading.

495. Presentation of Psychological Materials. (4) Seminar, to be arranged. Supervised practicum in understanding of research, design, and evaluation of the results of research. Enforced requisite: course 191A. Limited to advanced students in the field. May be repeated for credit. S/U grading.

Required Core Courses (8 units):

- Public Policy 10A with a grade of B or better. For more information, contact the program director/counselor by e-mail.

Required Upper-Division Courses (20 units): Public Policy 10A and one course from 10B, 101, 102, 119, 125, Honors Collegium 82, Social Welfare 191, Urban Planning 120, 121 or, by petition, another applied policy course. Highly recommended: one statistics and one microeconomics course.

Scope and Objectives

The Public Affairs minor teaches undergraduate students the skills of policy analysis and exposes them to many of the local, state, national, and international issues facing today's policymakers and opinion leaders. Courses explore the public (governmental) and nonprofit sectors and provide a theoretical, conceptual, and practical foundation for students. Particular attention is given to the vexing issues facing urban areas and urban planners, social welfare and social workers, and public policies that affect individuals and groups of people in their public and private lives.

Undergraduate Study

Public Affairs Minor

276H Public Affairs Building Box 951656 Los Angeles, CA 90095-1656

310-206-8966 paul@luskin.ucla.edu

http://luskin.ucla.edu/admissions/inside-luskin/#public-affairs

Anastasia Loukaitou-Sideris, PhD, Chair

Faculty Committee

Alfreda P. Iglehart, PhD (Social Welfare)
Joria J. Leap, PhD (Social Welfare)
Michael C. Lens, PhD (Urban Planning)
Anastasia Loukaitou-Sideris, PhD (Urban Planning)
Aaron L. Panofsky, PhD (Public Policy, Society and Genetics, Sociology)
Sarah J. Reber, PhD (Public Policy)

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Undergraduate Study

Public Affairs Minor

To enter the Public Affairs minor, students must have an overall grade-point average of 2.0 or better and complete Public Policy 10A with a grade of B or better. For more information, contact the program director/counselor by e-mail.

Required Core Courses (8 units):

- Public Policy 10A with a grade of B or better. For more information, contact the program director/counselor by e-mail.

Required Upper-Division Courses (20 units): Public Policy 10A and one course from 10B, 101, 102, 119, 125, Honors Collegium 82, Social Welfare 191, Urban Planning 120, 121 or, by petition, another applied policy course. Highly recommended: one statistics and one microeconomics course.

Scope and Objectives

The Public Health minor is designed for students who wish to learn more about core public health functions, including the assessment and monitoring of the health of communities and populations at risk to identify health problems and priorities, the formulation of public policies designed to solve identified local and national health problems and priorities, the assurance that all populations have access to appropriate and cost-effective care, and the evaluation of the effectiveness of that care.

Scope and Objectives

The Public Health minor is designed for students who wish to learn more about core public health functions, including the assessment and monitoring of the health of communities and populations at risk to identify health problems and priorities, the formulation of public policies designed to solve identified local and national health problems and priorities, the assurance that all populations have access to appropriate and cost-effective care, and the evaluation of the effectiveness of that care.
Undergraduate Study

Public Health Minor

To enter the Public Health minor, students must be in good academic standing with an overall grade-point average of 2.0 or better, have completed 90 or more units, and file a petition at the Fielding School of Public Health Student Affairs Office, A1-269 Center for Health Sciences. Enrollment is competitive and based on grade-point average and an application essay.

Required Upper-Division Courses (28 units):
Seven courses, including Biostatistics 100A, Community Health Sciences 100, Environmental Health Sciences 100, Epidemiology 100, Health Policy and Management 100, Public Health 150 (must be taken during the first term of enrollment in the minor), and one elective course to be selected from Biostatistics 100B, Community Health Sciences 91, 130, 132, M140, 180, 181, Health Policy and Management M110, C121, Public Health 53, M106, or M151. Transfer credit for any of the above is subject to school approval.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have a minimum grade of C (2.0) in each and an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Fielding School of Public Health offers two schoolwide degrees, Master of Public Health (MPH) and Doctor of Public Health (DrPH), and MS and PhD degrees in Biostatistics, Community Health Sciences, Environmental Health Sciences, Epidemiology, and Health Policy and Management. An undergraduate minor in Public Health is also offered.

One interdepartmental degree program—the PhD in Molecular Toxicology—is also available.

Eight concurrent degree programs (Community Health Sciences MPH/Urban Planning MURP, Environmental Health Sciences MPH/Urban Planning MURP, Public Health MPH/African Studies MA, Public Health MPH/Asian American Studies MA, Public Health MPH/Law JD, Public Health MPH/Management MBA, Public Health MPH/Public Policy MPP, Public Health MPH/Social Welfare MSW) and two articulated degree programs (Public Health MPH/Latin American Studies MA) are also offered.

Public Health

Lower-Division Courses

10. Introduction to Public Health. (4) Seminar, three hours. Designed for lower-division students. Introduction to range of topics, issues, and frameworks to help students understand current public health issues and public health systems, policies, and practices. P/NP or letter grading.


Upper-Division Courses

M106. Health in Chicanos/Latino Population. (4) (Same as Chicano and Chicano Studies CM106,) Lecture, four hours; discussion, one hour. Designed for juniors/seniors. Examination of Chicano/Latino health status through life expectancy, causes of death, reportable diseases, services utilization, provider supply, and risk behaviors within demographic/immigration changes. Binational review of health effects in U.S. and Mexico. Letter grading.


M151. Healthcare in Transitional Communities. (4) (Same as Sociology M142,) Lecture, three hours; discussion, one hour. Analysis of social, cultural, economic, and political processes affecting organization and accessibility of healthcare in transitional and disadvantaged communities. Fieldwork required. Letter grading.

M160A. Health Outreach and Education for At-Risk Populations. (4) (Same as Medicine M160A,) Lecture, four hours; possible field observations. First in series of courses to explore prevention of disease in at-risk populations, clinical services and referrals for disadvantaged, and effects of low socioeconomic status on academic achievement, career, and family. Lectures by faculty and practitioners, with field visits. P/NP or letter grading.

M160B. Health Outreach and Education for At-Risk Populations. (4) (Same as Medicine M160B,) Lecture, two hours; discussion, two hours. Required: course M160A. Second in series of courses to explore prevention of disease in at-risk populations, clinical services and referrals for disadvantaged, and effects of low socioeconomic status on academic achievement, career, and family. Lectures by faculty and practitioners, with field visits. P/NP or letter grading.

M273. Responsible Conduct of Research in Global Health. (2) (Same as Epidemiology M273,) Lecture, two hours. Required: Community Health Sciences 200. Introduction to fundamental principles of public health ethics, current ethical procedures, guidelines, and requirements, and ethical issues facing public health professionals working in developing countries. Study of public health issues, unique ethical issues of research in developing countries, analysis of ethical implications of informed consent, responsibility to study community, mechanisms of study approval, role of funders, and role and responsibilities of review boards. S/U or letter grading.

299. Strategies for Success for Doctoral Students. (2) Seminar, two hours. Interactive seminar, with focus on research process, tips for success in academia, and important tools for leadership designed for all doctoral students in School of Public Health. S/U grading.

475. Pedagogy: Essential Skills and Innovative Strategies. (2) Seminar, two hours. Designed for graduate students in School of Public Health doctoral students, including both the natural and social sciences.

Public Health Schoolwide Programs

Jonathan and Karin Fielding School of Public Health
A1-269 Center for Health Sciences
Box 951772
Los Angeles, CA 90095-1772
310-825-5524
http://ph.ucla.edu

Scope and Objectives

The profession of public health is responsible for the protection, preservation, and promotion of the health of communities and populations. Although the health problems of today differ from those of the past and of the future, the professionals who make up the field need to be trained to respond to broad community problems utilizing the basic ideas of prevention of disease and promotion of well-being. This goal can be achieved only with an understanding of the health status of the population through data gathering and analysis, as well as knowledge of the complex relationships between disease process in the social and biological environment of the community.

The field of public health today needs practitioners from many disciplines. Candidates for graduate study may come from a wide variety of academic backgrounds, training, or experience, including both the natural and social sciences.
Public Policy

Meyer and Renee Luskin School of Public Affairs

3250 Public Affairs Building
Box 951656
Los Angeles, CA 90095-1656
310-825-7667
mppinfo@luskin.ucla.edu
http://luskin.ucla.edu/public-policy

J.R. DeShazo, MSc, PhD, Chair

Professors

Michael R. Darby, PhD (Warren C. Cordner Professor of Money and Financial Markets)
J.R. DeShazo, MSc, PhD
Neal Hatlon, MPH
S. Jody Herring, MD, PhD
Susanne Lohmann, PhD
Mark A. Peterson, PhD
Thomas H. Rice, PhD
Michael A. Stoll, PhD
Fernando M. Torres-Gil, PhD
John D. Villaseñor, PhD
Lynne G. Zucker, PhD

Professors Emeriti

Albert Carnesale, PhD
Robert Daniels, PhD
Franklin D. Gilliam, Jr., PhD
Joel F. Handler, JD (Richard C. Maxwell Professor Emeritus of Law)
Mark A.R. Kleiman, PhD
Archie Kleingartner, PhD
Arlean Leibowitz, PhD
Daniel J.B. Mitchell, PhD (Ho-Su Wu Professor Emeritus of Management)
Barbara J. Nelson, PhD
Allen J. Scott, PhD
Charles E. Young, PhD

Associate Professors

Aaron L. Panofsky, PhD
Meredith Phillips, PhD
Sarah J. Reber, PhD
Manisha Shah, PhD
Wesley E. Yin, PhD

Assistant Professors

Randall K. Akee, PhD
Darin E. Christensen, PhD
Zoë S. Steinert-Threlkeld, PhD

Lecturers

Michelle Dennis, MPA, CFPO
Rick Tuttle, PhD

Visiting Professor

Michael S. Dukakis, JD

Scope and Objectives

The Department of Public Policy is an interdisciplinary unit composed of faculty members from various disciplines, some of whom hold joint appointments in other UCLA departments. Its goal is to foster an understanding of the theory and practice of public policy in the many fields in which it applies. Examples include education, healthcare, unemployment and training, drug policy and crime, economic development, national security, and the environment. The department offers the Master of Public Policy (MPP) degree and participates in the undergraduate minor in Public Affairs.

The MPP degree program is designed to train professionals in both public- and private-sector policy analysis and implementation, and offers coursework in such areas as microeconomics, statistics, political processes, and public and nonprofit management.

Concurrent degree programs allow students to combine study for an MPP with work toward a JD in the School of Law, an MBA in the Anderson Graduate School of Management, an MD in the Geffen School of Medicine, an MPH in the Fielding School of Public Health, or an MSW in the Department of Social Welfare.

The undergraduate minor in Public Affairs familiarizes students with key issues in public policy. Both programs have a heavy applied orientation. For further information on the minor, see Public Affairs earlier in this chapter of the catalog.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degree

The Department of Public Policy offers the Master of Public Policy (MPP) degree. Five concurrent degree programs (Public Policy MPP/Law JD, Public Policy MPP/Management MBA, Public Policy MPP/Medicine MD, Public Policy MPP/Public Health MPH, and Public Policy MPP/Social Welfare MSW) are also offered.

Public Policy

Lower-Division Courses

10A. Introduction to Public Policy. (5) Lecture, three hours; workshops and outside study, three hours. Overview of principal topics of contemporary policy analysis, developing their applications with examples from instructor's own research, visitors, small student projects, or field trips. P/NP or letter grading.

10B. California Policy Issues. (4) Lecture, three hours; outside study, nine hours. Application of policy analysis to California issues. Guest lectures from practitioners and academics along with readings and videos. Student written reports and oral presentations required. Letter grading.

10C. Public Policy for Crime, Cannabis, and Other Drugs. (5) Lecture, three hours; outside study, twelve hours. Application of policy analysis, including critical analysis, problem solving, and substantive policy research, to develop knowledge and understanding about drug and crime policy, with focus on cannabis. Guest lectures by instructors and guest academics and practitioners, with readings from academic literature and policy reports. P/NP or letter grading.

Upper-Division Courses

C101. Drug Abuse Control Policy. (4) Lecture, three hours; outside study, nine hours. Introduction to drug abuse as social problem and to drug abuse control as policy issue, with examination of both necessity and difficulty of making and executing wise policies around psychoactive substances. Concurrently scheduled with course C235. Letter grading.

102. Imperfect Rationality. (4) Lecture, three hours; outside study, nine hours. Idea that individuals are capable of acting rationally, in their own interest, is central to economic theory and to custom, law, and common sense thinking. Economics offers thorough account of ways in which such people should deal with choice, risk, and time. Casual observation and experimentation agree that actual behavior deviates in systematic ways from prescriptive model of rationality. Groups of rationally seeking individuals might fail to act as rationally self-seeking groups. Consideration of deviations between rational choices and actual behavior in public policies. Letter grading.

103. Ethics, Morality, and Public Life: Contemporary Controversies. (4) Lecture, four hours; outside study, eight hours. Study of ethical and moral questions that arise in public life. Goal is not to imbue students with a given body of factual knowledge or to develop new quantitative or social science methodologies to analyze such questions, but to enhance their critical thinking skills. Letter grading.

104. Culture and Political Structure of Los Angeles. (4) Lecture, three hours; outside study, nine hours. Exploration of two pieces of the puzzle in modern urban life: the different communities that live here (and in most other major cities) and political structure that binds us all together. Who are the communities living here? How do they organize themselves and develop leaders? How does integration into mainstream take place? What is “mainstream” today? How does political structure help or impede the notion of a united city? Letter grading.

105. Leadership in Public Interest. (4) Lecture, three hours. Examination of prevailing models, theories, and practices of leadership in public settings and application of them through case studies, films, and situational articles. Participation in group projects and discussions designed to improve understanding of role of leadership in mobilizing people groups to do difficult work. Introduction to literature and theory on leadership, examination of leadership and group dynamics, and challenge of leadership in times of stress and change. Letter grading.

112. Controversies in Education Policy. (4) Lecture, three hours; outside study, nine hours. Focus on several controversial topics in contemporary education. Topics vary each year and include multiculturalism, affirmative action, test score gap, bilingual education, and school choice. Introduction to major arguments for and against several important education policies and to encourage students to critically evaluate logic and evidence behind these policies. Letter grading.

113. Politics of U.S. Health Policy. (4) Lecture, three hours. Every modern nation faces similar health system challenges, such as promoting health, containing costs, and improving longevity, providing effective treatments, balancing benefits and burdens of medical technology, and controlling healthcare costs that grow faster than national income. U.S. seems uniquely disadvantaged in lower life expectancy, problematic quality of medical services, lack of insurance for millions, and highest costs in world, harming families, businesses, and government. What political dynamics produced this result and influence possibility and direction of ongoing policy change? Examination of meaning of health and healthcare; international experience; current status, organization, and financing of U.S. health-care system; and factors that affect national health policymaking, including comprehensive healthcare reform; framing of problems, role of public opinion, influence of interest groups, composition and organization of Congress, and opportunities for and application of presidential leadership. P/NP or letter grading.


207. International Political Economy. (4) Lecture, three hours; outside study, nine hours. Examination of political, legal, and social institutions to show where the U.S. fits in among varieties of modern capitalism and business-government relations. Analysis of domestic policies of nations are pursuing in response to economic globalization, such as protectionism, mercantilism, and deregulation. Introduction to international coalitions being formed, including NAFTA, and to nongovernmental organizations created to deal with special problems such as global environmental crisis. Letter grading.

208. Statistical Methods of Policy Analysis II. (4) Lecture, discussion, three hours; outside study, nine hours. Preparation for professional exams in government, banking, and similar sectors. Examining questions that seem to be subject to economic efficiency and touch on questions of public policy. Normative concerns are more urgent than others: those that go beyond matters of economic efficiency and touch on questions of public policy. Normative questions are those that concern whether actions, characters, or states of world are right or wrong, in less absolute cases, better or worse than possible alternatives. Allegedly value-free methods of analysis do not help decide policy questions. Certain policy questions such as ones on economic efficiency raise some strong ethical concerns. Agreement that exists over both what efficiency is and what constitutes efficiency is not always reached. Time and resources for attaining social welfare objectives; research and management skills to prepare students for work in government agencies. Letter grading.

209. Management in the 21st Century. (4) Lecture, three hours; outside study, nine hours. Focus on practical management skills to prepare students for workplace. Exercises, cases, and simulations. Letter grading.

210. Methods of Policy Analysis. (4) Lecture, three hours; outside study, nine hours. Preparatory course that precedes M290K and 290L. Overview of infrastructure to support needs of children in the United States, with emphasis on impact of policy across federal, state, and local levels. Letter grading.

211. Normative Issues in Policy Analysis. (4) Lecture, three hours; discussion, one hour. Limited to graduate students. Various patterns of community action and processes to attain social objectives and social change theory. Letter grading.


215. Health Policy. (4) (Same as Social Welfare M290M) Lecture, three hours. Introduction to contemporary policy options regarding health financing and delivery, providing historical perspective on emergence of these issues. Examination of major public programs and their relationship to issues of access and cost. S/U or letter grading.

216. Public Policy for Children and Youth. (4) (Same as Social Welfare M290N.) Lecture, three hours. Policy issues that affect children and adolescents in relation to their interaction with schools and community, with emphasis on impact of policy across federal, state, and local levels. Letter grading.

217. Research Design and Methods for Social Policy. (4) (Same as Urban Planning M204.) Lecture, three hours; outside study, nine hours. Limited to graduate students. How to become more sophisticated consumers and producers of qualitative and quantitative policy research. In first half of course, formal principles of research design; in second half, various research designs, including in-depth interviewing, and survey design. Letter grading.


219. Transportation, Land Use, and Urban Form. (4) (Same as Urban Planning M250.) Lecture, three hours. Historical evolution of urban form and transportation systems, intrametropolitan location theory, recent trends in urban form, spatial mismatch hypothesis, job housing mismatch in major metropolitan central city and polycentric city, neotraditional town planning debate, rail transit and urban form. Letter grading.

220. Travel Behavior Analysis. (4) (Same as Urban Planning M253.) Lecture, three hours. Requisites: courses 201 and 203, or Urban Planning 207 and 220B. Descriptions of travel patterns in metropolitan areas, non-traffic interactions over view of travel forecasting methods, trip generation, trip distribution, mode split traffic assignment, critique of traditional travel forecasting methods and new approaches to travel behavior analysis. Letter grading.

221. Transportation Economics, Finance, and Policy. (4) (Same as Urban Planning M256.) Lecture, three hours. Overview of transportation finance and economics; concepts of efficiency and equity in transportation finance; historical evolution of highway and transit finance; current issues in highway finance; private participation in road finance, toll roads, road costs and cost allocation, truck charges, congestion pricing; current issues in transit finance; ticket fare and subsidy policies, contracting and privatization of transit services. Letter grading.

222. Transportation and Environmental Issues. (4) (Same as Urban Planning M257.) Lecture, three hours. Regulatory structure linking transportation, air quality, and energy issues, chemistry of air pollution, overview of transportation-related approaches to air quality enhancement; new car tailpipe standards; vehicle inspection and maintenance issues; transportation demand management and transportation control measures; alternative fuels and electric vehicles; corporate average fuel economy and global warming issues; growth of automobile worldwide fleet; automobile in sustainability debate. Letter grading.

224A. Introduction to Geographic Information Systems. (4) (Same as Urban Planning M208A.) Lecture, three hours; laboratory, one hour. Preparation: one graduate-level statistics course, familiarity with one packaged statistics program. Principles of Geographic Information Systems (GIS) and applied techniques of using spatial data for mapping and analysis. Topics include data quality, data manipulation, spatial analysis, and information systems. Use of mapping and spatial analysis to address planning problems. Letter grading.

224B. Advanced Geographic Information Systems. (4) (Same as Urban Planning M208B.) Studio, three hours. Requisite: course M224A or Urban Planning M206A. Advanced topics in geographic information systems and evaluation; U.S. or international projects in ArcMap, map design, and spatial analysis. Letter grading.

225. Education Policy and Education Inequality. (4) Seminar, three hours; outside study, nine hours. Limited to graduate students. Examination of policies that may reduce socioeconomic and ethnic disparities in educational success. Topics include international and national comparisons of educational outcomes, private and public school choice, school accountability policies, interventions to improve school or teacher quality, parenting and preschool interventions, and supplemental educational services. Letter grading.


228. Leadership, Development, and Governance of Nonprofit Organizations. (4) (Same as Social Welfare M291E and Urban Planning M288.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Various patterns of community action and processes to attain social welfare objectives and field experience directed toward study of social problems within context of community planning; emerging patterns of physical, economic, and social planning within framework of social change theory. Letter grading.

229. Law and Management of Nonprofit Organizations. (4) (Same as Management M225.) Lecture, three hours. Introduction to important legal, financial, and management issues confronting nonprofit organizations. Topics include how to start nonprofit tax-exempt organizations, qualifying and maintaining tax-exempt status under IRC Code Section 501(c)(3), corporate governance, political activity restrictions, and strategic planning, fundraising, nonprofit accounting, and employment law. S/U or letter grading.

231. Comparative Industrial Relations. (4) (Same as Management M255.) Lecture, three hours; outside study, nine hours. Requisite: Management 409 or elementary knowledge of labor economics. At national and international levels, historical and contemporary analytical comparison of political, social, and economic contexts influencing human resource systems of selected developed countries. In addition to discussing possible frameworks for analyzing human resource systems, examination of institutions and ideologies of labor, management, and government, and interaction of their power relationships; substance and manner of determination of “web of rules” governing rights and obligations of the parties; and resolution of conflicts. Concurrently scheduled with course C144. S/U or letter grading.

233. Employment Issues in California. (4) Lecture, three hours; outside study, nine hours. Introduction to general features of California labor market, analysis of employment fluctuations and their causes, including linkages between employment fluctuations in California and elsewhere in the country, and social issues related to labor market. Letter grading.

234. Labor Markets and Social Policy. (4) Lecture, three hours; outside study, nine hours. Examination of analytical tools and conceptual models needed to understand policies directed toward people in lower tail
of income distribution. Concepts include static and dynamic labor supply, labor demand, compensating differentials, human capital, and economic models of immigration and crime. Letter grading.

C235. Drug Abuse Control Policy. (4) Lecture, three hours; outside study, nine hours. Introduction to drug abuse as public problem and to drug abuse control as policy issue, with examination of both necessity and difficulty of making and executing wise policies. Concepts include static and dynamic labor supply, labor demand, compensating differentials, human capital, and economic models of immigration and crime. Letter grading.

237. Ethical Questions in Public Life. (4) Lecture, three hours; outside study, nine hours. Introduction to moral issues that commonly arise in public life. Ethics of political roles, compromise and moral integrity, lying and deception, place of rhetoric in defending stand on issues, politics and violence. Letter grading.

238. Issues in Cultural Policy. (4) Seminar, three hours; outside study, nine hours. Designed for graduate students. Survey of role of policy in shaping forms and meanings of culture and cultural activities in contemporary society. Overview of relevant theories of culture and their ramifications in such phenomena as psychology, sociology, anthropology, and political science. Letter grading.

C239. Budget Politics, Social Policy, and Entitlement Reform. (4) Lecture, three hours; outside study, nine hours. Examination of politics of public budgeting in the U.S., with emphasis on financing of social safety net. Exploitation of budgetary process as setting both for gaining substantive knowledge about how government really works and for developing political skills required to influence resource allocation decisions. Concurrently scheduled with course C124. Letter grading.

M240. Theories of Regional Economic Development I. (4) (Same as Geography M230A and Urban Planning M236A.) Lecture, three hours; discussion, one hour. Introduction to theories of location of economic activity, trade, and other forms of contact between regions, process of regional growth and decline, reasons for different levels of economic development, relations between more and less developed regions. Letter grading.

M241. Introduction to Regional Planning. (4) (Same as Urban Planning M230.) Lecture, three hours. Critical and historical survey of evolution of regional planning theory and practice, with particular emphasis on relations between regional planning and developments within Western social and political philosophy. Major concepts include regions and regionalism, territorial community, and social production of space. Letter grading.

242. Regional Development, Urbanization, and Industrial Policy. (4) Lecture, three hours; outside study, nine hours. Survey of regional development, with focus on "econometric geography" and its relevance for formulation of local economic development policies. Letter grading.

M243. Community Development and Housing Policies: Roles of State, Civil Society, and Nonprofits. (4) (Same as Social Welfare M290U and Urban Planning M275.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Examination of role of U.S. housing policy and role of government agencies in housing policy. Is problem housing or economic development? Should interventions be directed toward inner city housing markets or through neighborhood strategies? What lessons can be learned from experiences of other countries? Letter grading.

M244. Transportation Policy and Planning. (4) (Same as Urban Planning M255.) Lecture, three hours. Introduction to analysis, management, and operation of transportation systems. Topics include evaluation of transportation system performance, causes and management of traffic congestion, transportation systems and demand management, complete streets, goods movement, shipping, aviation, and high-speed rail policy and planning, public transportation planning, transportation services for elderly and disabled, and intelligent transportation systems. Letter grading.

C245. Critical Policy Issues and Problems in Globalizing World. (4) Lecture, three hours; outside study, nine hours. How will we think about the world in dynamic terms, (2) be able to map, divide, and assemble world in many different ways, and (3) be able to articulate patterns of flux, change, and movement in the world. Letter grading.

M246. Electoral Democracy: Theory and Behavior. (4) (Same as Political Science M268B.) Seminar, three hours. Examination of both empirical and normative questions from rich variety of perspectives for scholars in all subfields of political science as well as policy students and others interested in these issues. Consideration of topics fundamental to both democratic theory and political behavior: public opinion; nature and purpose of elections; representation; parties; and purpose of democracy as whole—through both classic political theory traditions and modern research in American political behavior. Letter grading.

M247. Strategic Planning for Public and Nonprofit Organizations. (4) (Same as Social Welfare M241F and Urban Planning M290.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Technical processes of policy solving regarding substantive social welfare problems at community level. This form of community practice fills niche between substantive political science and skill set possessed by agency and program administrators on one hand and by policy analysts and policymakers on other. Letter grading.

M248. Tolerance, Pluralism, and Diversity. (4) (Same as Political Science M218.) Seminar, three hours. Prior experience in political or legal theory helpful. Exploration of both abstract concepts of tolerance and contemporary disputes. S/U or letter grading.


251. Public Budgeting and Finance. (4) Lecture, three hours; outside study, nine hours. Limited to graduate students. How financial resources are allocated through budget processes at federal, state, and local levels of government in the U.S. and how each level of government finances its operations and capital investment programs, with particular attention to California. Emphasis on government budgeting as a tool to facilitate review of assigned readings and to report key information to class. Based on assigned readings, development of budget strategy matrix outlining best practices budget strategies to use in various resource availability contexts. Letter grading.

C252. Introduction to Environmental Policy. (4) (Same as Urban Planning M263.) Lecture, three hours. Introduction to methodologies of environmental analysis covering variety of topics with cross-disciplinary perspectives. Development of ability to analyze major environmental and resource issues as well as write critically about environmental policy. Letter grading.

M253. Lesbian, Gay, Bisexual, and Transgender Law and Public Policy Research. (4) (Same as Law M675.) Lecture, three hours. Exploration of relevance of public policy research to lesbian, gay, bisexual, and transgender (LGBT) legal issues. Topics include LGBT identity and demographics, legal recognition of same-sex couples, parenting, workplace discrimination, transgender rights, intersections of race and sexuality, LGBT youth and safe schools, LGBT health disparities, and Don’t Ask, Don’t Tell. Discussion of social science research that exist in areas of LGBT law. Themes include doctrinal and other reasons why research has become more central to LGBT legal advancements in past decade, different types of public policy research, limitations of current data and research on LGBT issues, difficulties in translating social science research into evidence in courtroom, impact that dominant LGBT rights frame of equality has on social science research, conducting objective research, and effective presentation of social science research before legislators, judges, juries, media, and other audiences. S/U or letter grading.

M254. Strategic Planning for Public and Nonprofit Organizations. (4) (Same as Social Welfare M221A and Urban Planning M241.) Lecture, two hours; discussion, one hour; outside study, nine hours. Nature, roles, and history of welfare institutions in different societies; applicable social system theory of different components of welfare system; theory and research about welfare policies and organizations. S/U or letter grading.

M256. Advanced Topics in Health Economics. (4) (Same as Health Policy M149.) Seminar, four hours. Requisites: Health Policy 200A, 200B, M236. Advanced treatment of number of topics in health economics, including mental health economics, pharmaceutical economics, health manpower substitution, choice of efficient health insurance, policies for public insurance (Medicaid and Medicare), uninsured, and health insurance reform. Examination of effects of managed care on health and costs, consumer protection movement, and role of comparative health economics. Letter grading.

M257. Medicare Reform. (4) (Same as Health Policy M252.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Analytical and managerial skills learned earlier to be used to analyze problems with existing Medicare program and to develop specific options for reforming features of program to accommodate coming pressures generated by retirement of baby-boomer generation. Letter grading.

M258. Microeconomic Theory of Health Sector. (4) (Same as Health Policy M256.) Lecture, four hours; discussion, two hours. Intermediate microeconomics. Requisite: Biostatistics 100A. Microeconomic aspects of healthcare system, including health manpower substitution, choice of efficient health insurance, policies for public insurance (Medicaid and Medicare), uninsured, and health insurance reform. Examination of effects of managed care on health and costs, consumer protection movement, and role of comparative health economics. Letter grading.

M259. Healthcare Policy and Finance. (4) (Same as Health Policy M268.) Seminar, three hours; outside study, nine hours. Limited to graduate students. Analytical and managerial skills learned earlier to be used to analyze problems with existing Medicare program and to develop specific options for reforming features of program to accommodate coming pressures generated by retirement of baby-boomer generation. Letter grading.


271. Urban Poverty, Workforce Development, and Public Policy. (4) Lecture, three hours; outside study, nine hours. Limited to graduate students. Limited to graduate students. Examination of how urban labor market functions, particularly low-skill labor markets, and exploration of how public and private interventions affect outcomes for disadvantaged populations. In first half of course, major theories of low-skill workers’ labor market problems in
expression through new pricing, financing, and structural and behavioral considerations, coupling of science, technology, and organizational goals; assessing of and forecasting technological futures, S/U or letter grading.

M280B. Growth, Science, and Technology. (4) (Same as Economics M280B.) Lecture, three hours. Recent economic growth and continuing advances in science and technology are raising profoundly important public policy issues. Consideration of selection of critical policy issues, each of which has social, ethical, social, economic, political, scientific, and technological aspects. Concurrently scheduled with course CM182. Letter grading.

M286. Policy Analysis of Emerging Environmental Technologies. (4) (Same as Environmental Engineering M286.) Lecture, three hours. Acquisition and utilization of economic, finance, planning, and policy analytic tools needed to evaluate factors that drive market adoption from early to middle market phases. rooftop solar, electric vehicle, and energy efficiency as focal examples, with emphasis on role of policy and planning incentives intended to spur adoption. Letter grading.

M289A-M290B. Immigration, Racial Change, and Education in the Metropolitan. (4) (Same as Education M289A-M289B, Political Science M287A-M287B, and Sociology M290A-M290B.) Seminar, four hours. Examination of metropolitan American society at beginning of 21st century. Consideration of best available information on patterns of settlement, changing functions of urban space and institutions, and issues of opportunity and inequality linked to urban structure in society facing unprecedented demographic change that will end primarily European domination of our society by mid-century, creating demographic shifts with no racial or ethnic majority. How this demographic transition and postindustrial transformation of urban functions and space interact to shape opportunity and inequality. Vast economic transformations, brought about by globalization of workplace and explosive growth of industrial employment in advanced nations, not only greatly raise stakes on creating equal opportunity but also cut off what were previously important parts of intergenerational mobility. In Progress (M289A) and letter (M289B) grading.

290. Special Topics in Public Policy. (4) Discussion, three hours. Advanced seminar on emerging issues in policy public. May be repeated for credit. Letter grading.

M293. Privatization, Regulation, and Public Finance. (4) (Same as Urban Planning M243.) Lecture, three hours; outside study, nine hours. Requisite: course 201. Evaluation of economic and political determinants of trend toward privatizing public services, and equity and efficiency outcomes of this trend as expressed through new pricing, financing, and service-level policies. Exploration of new regulatory role this trend implies for state and local governments. Letter grading.

294. Education Markets and Education Policy. (4) Lecture, three hours. Designed for graduate students. Provides overview and serves as a framework for analyzing pressing policy questions in field of education and some substantive background in policy issues of the day. Letter grading.


297A. Marschak Colloquium: Policy Implications in Behavioral Sciences. (2) Seminar, two hours. Limited to graduate students. Students attend biweekly Marschak Colloquia presentations given by leading social science experts. Analysis and discussion of lecture topics and research models in behavioral sciences in this highly regarded and long-standing interdisciplinary lecture series that meets separately from colloquium presentations. Letter grading.

297B. Introduction to Public Policy. (2) Lecture, three hours; discussion, one hour. Designed for graduate students. Introduction to purposes and methods of public policy analysis. Exposure to key concepts and tools, such as market failures, decision analysis, costs and benefits, and comparative institutional analysis. Case studies supplement lectures and texts. S/U grading.

297C. Public Policy Analysis Lectures. (2) Activity, two hours. Limited to second-year M.P.P. students, venue for policymakers, practitioners, and academicians to present, discuss, and analyze current policy questions. Attending, formally analyzing, and engaging with policy professionals at these extra-curricular programs adds to personal and intellectual maturity of students as they gain greater understanding of complexity of public policy issues by hearing wide variety of voices. S/U grading.

297D. Public Policy Seminar Series. (2) Seminar, two hours; discussion, one hour. Weekly social science research lectures covering range of policy-relevant topics and discussion of research findings with professor. Examination of quality and relevance of research findings in areas such as law and policy implementation and are equivalent to professional master’s theses. Papers build on prior core courses, internship experience, and policy cluster courses. Letter grading.

298A. Applied Policy Project I. (2) Seminar. 90 minutes outside class, two hours. Lecture. Requisite: course 210. Limited to M.P.P. students. First course of year-long sequence designed to ensure that students and their teams are fully prepared to launch their projects at start of Winter Quarter. Students form teams that are assigned to seminars and instructors, identify clients, select and refine policy questions motivating their projects, develop and refine basic work plans, learn about various methods of data collection, and complete and submit all necessary forms required for human subjects research. S/U grading.

298B. Applied Policy Project II. (6) Seminar, three hours; outside study, 15 hours. Preparation: completion of M.P.P. core curriculum, two policy cluster courses, and internship (unless waived). Requisite: course 298A. Second course in three-term sequence in which students prepare major public policy projects and papers that are case studies of policy evaluation and implementation and are equivalent to professional master’s theses. Papers build on prior core courses, internship experience, and policy cluster courses. Letter grading.

298C. Applied Policy Project III. (2) Seminar, two hours. Preparation: completion of M.P.P. core curriculum, two policy cluster courses, and internship (unless waived). Requisite: course 298B. Third course in three-term sequence in which students complete research and report writing for their year-long projects, conduct oral presentations of their applied policy projects, and give written feedback on other student presentations. Letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

496. Public Policy Internships. (4) Fieldwork, four hours. Public policy internships for Master of Public Policy (M.P.P.) and M.P.P./dual degree students. May not be repeated for credit. S/U grading.

596. Directed Studies. (2 to 8) Tutorial, to be arranged. Limited to graduate students. Individual programming for selected students to permit pursuit of a subject in greater depth. S/U or letter grading.

RADIATION ONCOLOGY

David Geffen School of Medicine

B265 UCLA Medical Plaza 200
Box 956951
Los Angeles, CA 90095-6851
310-825-9775
http://radonc.ucla.edu

Michael L. Steinberg, MD, Chair
Daniel A. Low, PhD, Vice Chair, Division of Medical Physics
Joanne B. Weidhaas, MD, Vice Chair, Division of Molecular and Cellular Oncology
Percy P. Lee, MD, Vice Chair, Education
Steve P. Lee, MD, PhD, Vice Chair, VA Services

Scopes and Objectives

The Department of Radiation Oncology includes clinical divisions at the UCLA Medical Plaza and Reagan UCLA Medical Center, the Santa Monica-UCLA Medical Center, and West Los Angeles VA Medical Center and includes the Division of Brachytherapy, Division of Molecular and Cellular Oncology, and Medical Radiation Physics. Laboratory, clinical, and translational research are facilitated at all locations.

The primary clinical mission of the department is the management of patients who have cancer. The purpose of using radiation therapy, rather than or in addition to surgery, is to preserve function and/or cosmesis while eliminating the cancer. Other activities include total body irradiation before bone marrow transplantation, stereotactic body radiotherapy, brachytherapy, and stereotactic radiosurgery for A-V malformations, meningoasias, and malignant intracranial lesions. Research interests include clinical trials, radiation biology, radiation modifiers, molecular biology, immunology, and applied physics. Knowledge of the disease in question, the comparative efficacy of radiation therapy and other methods, radiation biology and pathophysiology, and the physical characteristics of various radiations is essential.

The educational programs serve medical, dental, basic science (biology and physics), nursing, and radiation therapy students, and community and postgraduate physicians; there also is a four-year program for residents who are qualifying for certification in radiation oncology by the American Board of Radiology.

http://radonc.ucla.edu
For more details on the Department of Radiation Oncology and a listing of the courses offered, see the department website.

Radiation Oncology

Upper-Division Course

199. Directed Research in Radiation Oncology. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Radiological Sciences

David Geffen School of Medicine
924 Westwood Boulevard, Suite 805
Box 957351
Los Angeles, CA 90095-7351
310-481-7512
http://radiology.ucla.edu

Dieter R. Enzmann, MD (Leo G. Rigler Professor of Radiological Sciences), Chair

Scope and Objectives

The medical student program in the Department of Radiological Sciences is designed to introduce students to the spectrum of diagnostic imaging modalities and their role in the clinical management of patients. It provides students with knowledge of essential radiographic anatomy and key imaging features of common diseases. The basic principles of all forms of diagnostic imaging pertaining to thoracic, musculoskeletal, gastrointestinal, genitourinary, cardiac, neuroradiology, mammography, pediatrics, emergency radiology, computed tomography, magnetic resonance imaging, ultrasound, and interventional radiology are provided. Students acquire interpretative skills by didactic instruction and interactive teaching sessions and through the use of Web-based teaching materials. A longitudinal core clerkship is offered during the third year, with a comprehensive examination.

Greater depth of experience is provided by the three weeks of elective clerkship offered to fourth-year medical students that emphasizes training in general diagnostic radiology, angiography/interventional radiology, neuroradiology, and pediatric radiology.

For more details on the Department of Radiological Sciences, see the department website.

RELIGION, STUDY OF

Interdepartmental Program
College of Letters and Science
351 Humanities Building
Box 951511
Los Angeles, CA 90095-1511
310-206-8799
http://religion.ucla.edu/academic-overview/

Carol A. Bakhos, PhD, Chair

Faculty Committee

Carol A. Bakhos, PhD (Near Eastern Languages and Cultures)
Jacco Dieleman, PhD (Near Eastern Languages and Cultures)
Eleanor K. Kaufman, PhD (Comparative Literature, English, French and Francophone Studies)
Carla Gardina Pestana, PhD (History)
Allen F. Roberts, PhD (French and Francophone Studies, World Arts and Cultures/Dance)
Ronald W. Vooren, PhD (Slavic, East European, and Eurasian Languages and Cultures)

Scope and Objectives

The undergraduate major in the Study of Religion equips students to understand and compare creatively the worldwide varieties of core convictions, stories, texts, rituals, and practices known collectively as religion. Students complete courses in a wide range of departments in which religious phenomena are analyzed, including Anthropology, Art History, Asian Languages and Cultures, Classics, Comparative Literature, English, History, Near Eastern Languages and Cultures, Philosophy, Political Science, and World Arts and Cultures/Dance. Students can appreciate gaining versatile intellectual tools for approaching, analyzing, and appreciating the deep roots, human motivations, and history of the formation of religious traditions in their respective cultural contexts. Within this interdepartmental program, students may focus in depth on one or more specific religious traditions. Students may wish to select this major in combination with a second major field, a minor, or related language study.

Undergraduate Study

The Study of Religion major is a designated capstone major. Students must complete an advanced seminar that provides unique opportunity to work closely with a faculty mentor on a focused topic of research. Through their capstone work students are expected to demonstrate their ability to plan and carry out a major project, apply subject matter and research methods knowledge to produce a paper or other research project, and organize information into a coherent and persuasive form for oral presentation to their peers.

Study of Religion BA

Capstone Major

Required: Study of Religion M4 or 11, and two courses from Ancient Near East 10W, Anthropology 3, Asian M60, History 1A, 1B, 1C, 9A, 9C, 9D, 9E, M10A, 10B, 11A, 11B, Philosophy 2, 21, Study of Religion M10, M50, M60A through M60E, M60W, M61, M61W.

Transfer Students

Transfer applicants to the Study of Religion major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one history of religions course, one philosophy of religion course, and two courses from sociocultural anthropology, Buddhism, history of Western civilization, Asian civilizations, civilizations of Africa, and history of China.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major


Student are encouraged to select courses that focus on a specific religious tradition or traditions, or on a set of thematic issues important to the study of religion. During their senior year students must complete the capstone seminar, Study of Religion 191.

A course may be taken twice, on different topics, for credit toward the major where repetition is allowed by the department offering the course. A maximum of two upper-division courses in an ancient language relevant to the course of study may be applied toward the major requirements with consent of the adviser.

A maximum of 12 units of special studies courses (197, 198, 199) approved by the adviser may be applied toward the major. Each course for preparation for the major and the major must be taken for a letter grade.

Honors Program

The honors program provides exceptional students with an opportunity to do independent research under the tutorial guidance of a faculty member. Students admitted to honors should take three Study of Religion 198 courses under the guidance of the sponsoring professor. The first 198 course should be taken in spring quarter of the junior year, the second during the following fall quarter, and the third during winter quarter of the senior year. The
three courses count as part of the regular requirement of 12 upper-division courses. The program culminates in an honors thesis. To qualify for admission students should have a minimum grade-point average of 3.4. The 198 courses designed for the program and the thesis topic should be approved by the committee in charge of the major.

For further information, contact the student affairs officer or the faculty adviser at the program address.

Study of Religion Minor

To enter the Study of Religion minor, students must have an overall grade-point average of 2.0 or better.

Required Lower-Division Courses (4 to 10 units): Study of Religion M4 or 11, or M50 and M60A or M60W.


Student are encouraged to select courses that focus on a specific religious tradition or traditions, or on a set of thematic issues important to the study of religion.

A course may be taken twice, on different topics, for credit toward the minor where repetition is allowed by the department offering the course. A maximum of 4 units of special studies courses (197, 198, 199) approved by the adviser may be applied toward the minor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Study of Religion

Lower-Division Courses

M4. Introduction to History of Religions. (5) (Same as History M4.) Lecture, three hours; discussion, two hours. Comparative study of eight major religious traditions, with emphasis on their beginnings and subsequent decisive changes in their respective historical developments and interactions. Equips students with intellectual tools necessary for thinking analytically, empathetically, and comparatively about fascinating human phenomena identified as religious, such as sacred acts, places, words, and persons in their varied historical contexts. Development of student skills in critical thinking, analyzing documents, and making persuasive arguments based on historical evidence. P/NP or letter grading.

M10. Social, Cultural, and Religious Institutions of Judaism. (5) (Same as Jewish Studies M10.) Lecture, three hours; discussion, one hour. Judaism’s basic beliefs, institutions, and practices. Topics include development of biblical and rabbinic Judaism; concepts of God, sin, repentance, prayer, and the messiah; history of Talmud and synagogue; evolution of folk beliefs and year-cycle and life-cycle practices. P/NP or letter grading.

11. Religion in Los Angeles. (4) Lecture, four hours. Introduction to varieties of religious experience in Los Angeles and its environs. Presentations, required readings, and (where possible) site visits to examine selected faiths and spiritual practices throughout Southern California and provide deeper understanding of myriad ways that sacred is made manifest and encountered. Foundational academic orientations within study of religion (anthropological, historical, cultural, psychological) provide a framework for examining and understanding diverse religious landscape. P/NP or letter grading.

14. Origins of Judaism. (5) (Same as Slavic M40.) Lecture, three hours; discussion, one hour. Survey of three of major historical branches of Christianity—Eastern and Oriental Orthodox, Roman Catholicism, and Protestantism, contrasting how history, doctrine, culture, and community structures develop in those three traditions. A course may be taken twice, on different topics, for credit toward the minor where repetition is allowed by the department offering the course. A maximum of 4 units of special studies courses (197, 198, 199) approved by the adviser may be applied toward the minor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Study of Religion Minor

Required Lower-Division Courses (4 to 10 units): Study of Religion M4 or 11, or M50 and M60A or M60W.


Student are encouraged to select courses that focus on a specific religious tradition or traditions, or on a set of thematic issues important to the study of religion.

A course may be taken twice, on different topics, for credit toward the minor where repetition is allowed by the department offering the course. A maximum of 4 units of special studies courses (197, 198, 199) approved by the adviser may be applied toward the minor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.
M107. Islam in West. (Same as Arabic M107 and Islamic Studies M110.) Lecture, three hours; discussion, one hour. Genesis of Islam, its doctrines, and practices, with readings from Qur’an and Hadith; schools of law; and political, religious, and cultural history of Muslims. P/NP or letter grading.

M108. Islamic Studies M108. Lecture, three hours. How Qur’an as scripture shapes Muslim doctrine, rituals, and culture, and how throughout history Muslims have determined interpretations and applications of Qur’anic doctrines and prescriptions. Critical evaluation and analysis of contemporary discourses on Islam. Letter grading.

M109. Introduction to Islam. (Same as Islamic Studies M110.) Lecture, three hours; discussion, one hour. Genesis of Islam, its doctrines, and practices, with readings from Qur’an and Hadith; schools of law; and political, religious, and cultural history of Muslims. P/NP or letter grading.

110. Religion and Violence. (4) Seminar, three hours; discussion, one hour. Examination of complex relationship between religious traditions and various media (e.g., print, film, photography, television, radio, and electronic) as they have interacted in specific historical and cultural contexts. Illumination of role of media in forming and expressing religious ideas, practices, and identities. Topics may include representations of religious groups, visual and aural piety, identity formation, interreligious conflict, religious education, and use of media technologies for propaganda or proselytizing purposes. Historical, sociological, and anthropological approaches to various religious media. P/NP or letter grading.

150. Women, Gender, and Religion. (4) Lecture, four hours. Investigation and consideration of roles, status, and representations of women and gender in one or more religious traditions. Examination of how cultural, historical, and social factors shape religious roles, and treatment of some key questions in gender studies. Examination of both formal and informal religious practices; gender, sexual identity, sexuality, sexual renunciation, religious authority, marriage and family life, fertility, conceptions of body, public life, and cultural conceptions of gender as well as social realities. Anthropological, historical, sociological, and anthropological. P/NP or letter grading.


160. Religion, Film, and Media. (4) Lecture, four hours. Examination of complex relationship between religious traditions and various media (e.g., print, film, photography, television, radio, and electronic) as they have interacted in specific historical and cultural contexts. Illumination of role of media in forming and expressing religious ideas, practices, and identities. Topics may include representations of religious groups, visual and aural piety, identity formation, interreligious conflict, religious education, and use of media technologies for propaganda or proselytizing purposes. Historical, sociological, and anthropological approaches to various religious media. P/NP or letter grading.

161A. Chinese Buddhism. (4) (Same as Chinese CM160.) Lecture, three hours; discussion, one hour. Knowledge of Chinese not required. Introduction and development of Buddhism in China, interaction between Buddhism and Chinese culture, rise of Chinese schools of Buddhism. Letter grading.

161B. Japanese Buddhism. (4) (Same as Japanese CM160.) Lecture, three hours; discussion, one hour. Knowledge of Japanese not required. Development of Buddhism in Japan in its cultural context, with emphasis on key ideas and teachings. Letter grading.

161C. Korean Buddhism. (4) (Same as Korean CM160.) Lecture, three hours; discussion, one hour. Knowledge of Korean not required. Introduction and development of Buddhism in Korea, interactions between indigenous Korean culture and Sinic traditions of Buddhism, Korean syntheses of imported Buddhist theological systems and meditative techniques, and independent Son (Zen) schools of Korea. Letter grading.

161D. Buddhism in India. (4) (Same as South Asian CM160.) Lecture, three hours; discussion, one hour. Knowledge of Indian languages not required. Overview of social and doctrinal history of Buddhism from its origin to its disappearance in India, based not only on texts but also on archaeological, art historical, and inscriptive evidence. Examination of both formal doctrine and actual practices and on what learned Buddhists wrote and ordinary Buddhists did, saw, and made. Letter grading.

161E. Buddhism and Violence. (4) Lecture, three hours; discussion, one hour. Knowledge of original languages not required. Buddha (Old and New Testaments) as book, Canon, text, and versions. Linguistic, literary, historical, and religious approaches to Buddhist culture. Controversy over authenticity. Prejudice from antiquity to present. P/NP or letter grading.

M173C. Shinto, Buddhism, and Japanese Folk Religion. (4) (Same as History M173C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Social dimension of various Ways, great and little. Shinto’s connection with culture, nationalism, Buddhism and Shinto’s relation to warrior culture, folk religious aspects such as shamanism, ancestor worship, and militarism. P/NP or letter grading.

M174D. Indo-Islamic Interactions, 700 to 1750. (4) (Same as History M174D.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Historical introduction to Muslim contact with the great world cultures of China, India, Central Asia, and the Iberian Peninsula. Topics include Islamization in Spain, politics, religious, and cultural history. P/NP or letter grading.

M174E. Indo-Islamic Interactions, 1750 to 1950. (4) (Same as History M174E.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of interplay of factors that, from Christian missionaries to Islamic madrasas, brought religions and colonial rebellions, gave shape to multiple facets of Islamic reformation in the context of colonial modernity. P/NP or letter grading.

177. Variable Topics in Religion. (Seminar, three hours. Interdisciplinary approach to some major topics in study of religion, science, religion and society, politics, mysticism, ideas of revelation, scripture, myth and religion, worship and ritual. May be repeated for credit with topic change. P/NP or letter grading.

M175. Variable Topics. (4) (Same as Middle Eastern Studies M175.) Seminar, three hours. Interdisciplinary approach to some major topics in study of religion and Middle Eastern studies. May be repeated for credit with topic change. P/NP or letter grading.

180. Religion and Modern Critical Thought. (4) Lecture, four hours. Examination of how various traditions of modern critical thought inform academic study of religion, with primary focus on philosophical analysis of religious belief and practice and its relation to other areas of theoretical discussion, such as philosophy of language, discourse analysis, epistemology, metaphysics, ethics, practice theory, and political theory. Topics may include nature of religious experience and its epistemic status, embodiment and religious self, relationship between knowledge, faith, and doubt, nature and function of religious language, relationship between science and religion, religious belief and standards of rational discourse, theoretical approaches to problems of religious diversity and conflict, truth claims, and religiously diverse and secular in modernity. P/NP or letter grading.

180A. Buddhist Studies. (4) (Same as History M180A and Buddhist Studies M180B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for seniors/juniors. Survey of social, political, and religious developments. P/NP or letter grading.

180B. Medieval Jewish History. (4) (Same as History M180B and Jewish Studies M180B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of unfolding of Jewish history from rise of Christianity to expulsion from Spain during the Inquisition. P/NP or letter grading.

180A. Jewish Civilization: Encounter with Great World Cultures. (4) (Same as History M180A and Jewish Studies M180A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of dynamic and multifaceted Jewish reformation in context of colonial modernity. P/NP or letter grading.

182A. Ancient Jewish History. (4) (Same as History M182A and Jewish Studies M182A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of unfolding of Jewish history from rise of Christianity to expulsion from Spain during the Inquisition. P/NP or letter grading.

182A. Jewish Civilization: Encounter with Great World Cultures. (4) (Same as History M180A and Jewish Studies M180A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of dynamic and multifaceted Jewish reformation in context of colonial modernity. P/NP or letter grading.

182B. Medieval Jewish History. (4) (Same as History M182B and Jewish Studies M182B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of social, political, and religious developments. P/NP or letter grading.

185D. Religions of Ancient Near East. (4) (Same as History M185D and Near Eastern Studies M185D.) Lecture, three hours; discussion, one hour (when scheduled). Designed for seniors/juniors. Main polytheistic systems of ancient Near East, with emphasis on Mesopotamia and reference to religion of ancient Israel: varying concepts of divinity, hierarchies of gods, prayer and cult, magics, wisdom, and moral conduct. P/NP or letter grading.
M186A. History of Early Christians. (4) (Same as History M185F) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Christian movement from its origins to circa 160 C.E., stressing its continuity/discontinuity with Judaism, various responses to Jesus of Nazareth, writings produced during this period, movement's encounters with its religious, social, and political world, and methods of research. P/NP or letter grading.

M186B. Religious Environment of Early Christians. (4) (Same as History M185G) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Rich variety in religious practice and thought in Mediterranean world of 1st century C.E. as in context of developing Christian movement. Topics include Pharisees, Qumran, Philo, Stoics, Epicureans, traditional Greek and Roman religions, mysteries, astrology, magic, gnosticism, and emperor-worship. P/NP or letter grading.

M186C. Jesus of Nazareth in Historical Research. (4) (Same as History M185L) Lecture, three hours; discussion, one hour (when scheduled). Recommended preparation: course M185F. Designed for juniors/seniors. Stimulated by significant post-Enlightenment historical evaluations, students are led into firsthand knowledge (in translation) of various multilayered sources for reconstruction of life, teaching, and initial impact of Jesus of Nazareth in his social, economic, political, and religious contexts. P/NP or letter grading.

191. Variable Topics Research Seminars: Study of Religion. (4) Seminar, four hours. Preparation: completion of preparation for major courses and at least half of upper-division courses required for major (including theory and method courses). Designed for seniors. Seminar on central method and/or theme in study of religion. Refinement and integration of this knowledge by means of close reading and analysis of primary documents, debating contested issues, and researching and writing original paper. P/NP or letter grading.

198. Honors Research in Religion. (4) Tutorial, three hours. Limited to juniors/seniors. Development and completion of 40-page honors thesis under direct supervision of faculty member. May be repeated twice to receive departmental honors program credit. Individual contract required. May be repeated for a maximum of 12 units. Letter grading.

199. Directed Research in Study of Religion. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Culminating paper or project required. Twelve units may be applied toward major. Individual contract required. Letter grading.

Undergraduate Courses
No credit is allowed for completing a less advanced course after successful completion of a more advanced course in Danish, Norwegian, and Swedish grammar and/or composition. Students with demonstrated preparation may be permitted a more advanced program by the section or may be transferred to a more advanced course with consent of the instructor.

Nordic Studies BA
Capstone Major
The Major
Required: Nine courses from the following five tracks, with at least one course in four of the tracks: (1) early Nordic literatures and cultures—Scandinavian C131, 132A, 132B, C133A, 134, C137, 138, (2) theory, genres, and authors—Scandinavian C141A, 141B, 141C, 142A, 143C, CM144A, C145A, C145B, C146A, C147A, C147B, (3) literary periods—Scandinavian 152, 155, 156, 157, (4) Scandinavian cinema—Scandinavian 161, C163A, C166A, C166C, (5) cultural studies—Scandinavian C171, 173A, C174A, C175, C180, and one senior capstone course (Scandinavian 199) under the direction of a faculty member.

Scope and Objectives
Scandinavia consists of five northern European countries: Denmark, Finland, Iceland, Norway, and Sweden. These countries form a geographic bridge between the American and European continents and a political bridge between Western and Eastern Europe. For all students of language, literature, the arts, and the social and physical sciences, Scandinavia is of particular interest.

The Scandinavian Section offers two majors, one minor, and a Master of Arts program. The BA in Scandinavian Languages and Cultures provides students with a broad, yet robust, knowledge of the languages, literatures, and cultures of the Nordic countries. The BA in Scandinavian studies undergraduate students in a broad, interdisciplinary understanding of the Nordic region. The goal of this major is to provide students with a robust knowledge of the cultures and histories of this region from a global and transdisciplinarian perspective. This major allows interested students an opportunity to explore the Nordic region from the perspective of non-Humanities disciplines, if they choose, while requiring a strong grounding in the history and cultures of the region. The minor in Scandinavian Languages is designed to give students a command of the intellectual history of the region and a developing appreciation of its literatures and cultures. Graduate study leads to the Master of Arts in Scandinavian. Graduate students are expected to concentrate on one Scandinavian language, though they study the literatures of the other areas.

Undergraduate Study
The Scandinavian Languages and Cultures and Nordic Studies majors are designated capstone majors. Under the guidance of faculty members, students are required to devise, research, and complete either a substantial research paper, film/video, or a website that reflects significant engagement with a challenging question in the realm of Scandinavian languages and cultures or Nordic studies. Through their capstone work, all students are expected to demonstrate their skills in articulating a clear and sophisticated research question, devising a realizable set of research goals, deploying their advanced knowledge of a Nordic language to access target language research materials and incorporate them into the research corpus, devise an appropriate modality for the final project, present a concise engaging public presentation of their research and respond to questions, and archive their project in an appropriate form.
147A, C147B, (3) literary periods—Scandinavian 152, 155, 156, 157, (4) Scandinavian cinema—Scandinavian 161, C163A, C166A, C166C, (5) cultural studies—Scandinavian C171, C174A, 174B, C175; and one senior capstone course (Scandinavian 199) under the direction of a faculty member.

Also required is a second-year language sequence selected from Scandinavian 105A, 105B, and 105C, or 106A, 106B, and 106C, or 107A, 107B, and 107C, or 132A, 132B, and 132C. Students with language preparation equivalent to two years of language must take an additional three upper-division courses in lieu of the second-year language sequence.

As an option, four upper-division courses in a related field may be taken if approved in advance by the graduate adviser. In general, the courses must include significant content related to the Nordic region. It is recommended that students who plan to do graduate work in Scandinavian take German 1 through 6.

Scandinavian Minor

To enter the Scandinavian minor, students must have an overall grade-point average of 2.0 or better.

Required Courses (28 units): Any seven Scandinavian courses, two of which may be lower-division courses selected from Scandinavian 1 through 50:

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degree

The Scandinavian Section offers the Master of Arts (MA) degree in Scandinavian.

Scandinavian

Lower-Division Courses

4. Elementary Swedish: Intensive. (12) Lecture, 15 hours; laboratory, five hours. Intensive basic course in Scandinavian equivalent to courses 1, 2, and 3. Offered in summer only. P/NP or letter grading.
7. Accelerated Elementary Norwegian. (6-8) Lecture, four hours. Requisite for course 14B: course 14A. Accelerated courses 14A and 14B equivalent to courses 11, 12, and 13. Introduction to basics of Norwegian language. Development of ability to converse and write in Norwegian through oral and written exercises. Students read and listen to online sample texts, watch clips of Norwegian programs, and expand on daily homework exercises. P/NP or letter grading.
8. Intermediate Danish. (4) Discussion, four hours. P/NP or letter grading.
14A-14B. Accelerated Elementary Norwegian. (6-8) Lecture, four hours. Requisite for course 14B: course 14A. Accelerated courses 14A and 14B equivalent to courses 11, 12, and 13. Introduction to basics of Norwegian language. Development of ability to converse and write in Norwegian through oral and written exercises. Students read and listen to online sample texts, watch clips of Norwegian programs, and expand on daily homework exercises. P/NP or letter grading.
40. Heroic Journey in Northern Myth, Legend, and Epic. (4) Lecture, three hours. Not open for credit to students with credit for course 40W. All readings in English. Comparison of journeys of heroes. Readings in mythology, legend, folklore, and epic, including Nibelungenlied, Volsunga saga, Eddas, and Beowulf. Cultural and historic backgrounds to texts. P/NP or letter grading.
50. Heroic Journey in Northern Myth, Legend, and Epic. (4) Lecture, three hours. Discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 26. Not open for credit to students with credit for course 40. All readings in English. Comparison of journeys of heroes. Readings in mythology, legend, folklore, and epic, including Nibelungenlied, Volsunga saga, Eddas, and Beowulf. Cultural and historic backgrounds to texts. Satisfies Writing II requirement. Letter grading.
50W. Introduction to Scandinavian Literatures and Cultures. (5) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 50W. Designed for students in general and for those wishing to prepare for more advanced and specialized studies in Scandinavian literature and culture. Selected works from literatures of Denmark, Norway, Sweden, Iceland, and Finland, ranging from myth, national epic, saga, and folklore through modern novel, poem, play, short story, and film, read in English and critically discussed. P/NP or letter grading.
50W. Introduction to Scandinavian Literatures and Cultures. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 26. Not open for credit to students with credit for course 50. Designed for students in general and for those wishing to prepare for more advanced and specialized studies in Scandinavian literature and culture. Selected works from literatures of Denmark, Norway, Sweden, Iceland, and Finland, ranging from myth, national epic, saga, and folklore through modern novel, poem, play, short story, and film, read in English and critically discussed. P/NP or letter grading.
50W. Introduction to Scandinavian Literatures and Cultures. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 26. Not open for credit to students with credit for course 50. Designed for students in general and for those wishing to prepare for more advanced and specialized studies in Scandinavian literature and culture. Selected works from literatures of Denmark, Norway, Sweden, Iceland, and Finland, ranging from myth, national epic, saga, and folklore through modern novel, poem, play, short story, and film, read in English and critically discussed. P/NP or letter grading.

Upper-Division Courses

105A-105B. Intermediate Swedish. (4-4) (Formerly numbered 4, 5) Lecture, four hours. Enforced requisite for course 105A: course 3; for course 105B: course 105A, P/NP or letter grading.
105C. Advanced Swedish. (4) (Formerly numbered 105) Lecture, three hours. Enforced requisite: course 105B. Readings, composition, and conversation in Swedish. May be repeated once for credit. P/NP or letter grading.
106C. Advanced Norwegian. (4) (Formerly numbered 106B) Lecture, three hours. Enforced requisite: course 106B. Reading, composition, and conversation in Norwegian. May be repeated once for credit. P/NP or letter grading.
107C. Advanced Danish. (4) (Formerly numbered 107) Lecture, three hours. Enforced requisite: course 107B. Readings, composition, and conversation in Danish. May be repeated once for credit. P/NP or letter grading.
C131. Introduction to Viking Age. (4) Lecture, three hours. History, society, and culture of early Scandinavians. All texts in English, including readings in Old Norse sagas and Eddas. Concurrently scheduled with course C231. Letter grading.
132A. Elementary Old Norse. (4) Lecture, three hours. Introduction to grammar and pronunciation of Old Norse. Selected readings from sagas and Prose Edda. P/NP or letter grading.
132C. Advanced Old Norse. (4) Lecture, three hours. Enforced requisite: course 132B. Readings from variety of Old Norse-Icelandic texts. Continuation of development of translation skills, as well as familiarity with Old Norse-Icelandic texts and philological, linguistic, literary, and cultural issues surrounding their interpretation. P/NP or letter grading.
C133A. Saga. (4) Seminar, three hours. Sagas are largest extant medieval prose litterae. Texts in English, with sections from different types of Icelandic sagas. Consideration of history and society that produced these narratives. Concurrently scheduled with course C233A. Letter grading.
133C. Social Network Analysis and Icelandic Family Saga. (4) Seminar, three hours. Exploration of how character interactions can be used as basis for developing social network visualization of how saga action plays out. Examination of how best to model sagas as dynamic social networks and learn about metrics and analytical approaches from social network analysis (SNA) that deepen understanding of saga actions. SNA provides additional opportunity to explore hypothetical situations and recognize altern-
tive social pathways that may have led to other types of community formations. Study of Icelandic saga toward increasing complexity, developing understanding of characters and character roles, and using this as basis of preliminary investigations. P/N or letter grading.

134. Scandinavian Mythology. (4) Seminar, three hours. Overview of major gods and goddesses, heroes and heroines, narratives and adventures that make up lore collectively referred to as Scandinavian, or Norse, myth. Reading and examination of this lore that is chiefly preserved in two collections traditionally called Poetic (or Elder) Edda and Prose (or Younger) Edda. P/N or letter grading.


138. Vikings. (5) Lecture, three hours; discussion, one hour. Survey of history, anthropology, and archaeology of Viking Age society. Readings draw on medieval sagas as well as secondary material, focus on impact of Vikings on northern Europe, and consider ways in which European and Scandinavian societies evolved in response to Viking invasions. P/N or letter grading.

C141A. Theory of Scandinavian Novel. (4) Seminar, three hours. Analysis of predominant structures of Scandinavian novel from its 18th-century beginnings through its rise in 19th century and its 20th-century evolution. Discussion of application of contemporary critical theories. May be concurrently scheduled with course C241A. P/N or letter grading.

141B. Nordic Poetry. (4) Seminar, three hours. Readings in English translation. Survey of Nordic poetry from Middle Ages to present, including Poetic Edda of 13th-century Iceland, Scandinavian ballad tradition, some folk poetry from Finland's national epic Kalevala, and modern lyric. Reading of essays on translating poetry and consideration of particular problems poetry presents in its translation, as well as what is included and/or gained in translation. Study of poetry within following contexts: role(s) poetry has served in Nordic societies from 13th century to present day; Nordic poets' influence on and contributions to European literary movements; and special status of poetry in preserving small national languages and literatures, as indicated by financial support from Nordic states and publications of major Nordic/European literary figures and their poetry. P/N or letter grading.


142A. Introduction to Nordic Theater and Drama. (4) Lecture, three hours. Examination of artistic legacy of Henrik Ibsen and August Strindberg in context of emergence of modern Nordic theater and drama as whole, as well as contributions of their contemporaries and successors. Readings include plays, letters, speeches, and memoirs by Ludvig Holberg, Henrik Ibsen, August Strindberg, Pär Lagerkvist, Kjeld Abell, Ernst Mejer, Manne, Hrafnhildur Hagalín Gudmundsdóttir, and Jonas Hassen Khemir. P/N or letter grading.

143A. Scandinavian Detective Fiction. (4) Seminar, three hours. Scandinavian authors have been writing detective fiction for years. Maj Sjöwall and Per Wahlöö were famous worldwide in 1960s and 1970s, especially with their Martin Beck series, and once they had established that Scandinavian writers could be successfully translated into many languages, others followed. Scandinavian authors, while following traditional rules of crime fiction, also analyze and often criticize values and cultures of their societies. Reading of these works as representations of critical social and intellectual problems not only in Scandinavia, but in Europe and world at large. P/N or letter grading.


CM144A. Voices of Women in Nordic Literature. (4) Same as Gender Studies M186.) Seminar, three hours. Requisite: course 5 or 15 or 25. Knowledge of Scandinavian languages not required for nonmajors. Readings and discussion of writings by Scandinavian women writers analyzed in historical, theoretical, sociological, critical, and comparative contexts. May be concurrently scheduled with course C244A. P/N or letter grading.

C145A. Henrik Ibsen. (4) Seminar, three hours. Readings and discussion of selected plays by Henrik Ibsen. May be concurrently scheduled with course C245A. P/N or letter grading.

C145B. Knut Hamsun. (4) Seminar, three hours. Readings and discussion of selected works by Knut Hamsun and other 19th- and 20th-century Scandinavian writers. May be concurrently scheduled with course C245A. P/N or letter grading.

146A. August Strindberg. (4) Seminar, three hours. August Strindberg's portrayals of marital conflict reflect and shaped representation of so-called battle of sexes. His work, as well as its literary transformations, placed into Scandinavian, European, and feminist context. May be concurrently scheduled with course C246A. P/N or letter grading.

147A. Hans Christian Andersen. (4) Lecture, two hours; discussion, one hour. Study of works of Hans Christian Andersen, Danish novelist, dramatist, and writer of tales, including consideration of his literary background and of his times. Analysis of his works in terms of their structure, style, and meaning. P/N or letter grading.

C147B. Søren Kierkegaard. (4) Seminar, three hours. Readings and discussion of selected works by Søren Kierkegaard and other existentialist writers. May be concurrently scheduled with course C247B. P/N or letter grading.

147C. Karen Blixen. (4) Lecture, three hours. Investigation of life, work, writings, and legacy of Danish author Karen Blixen, also known in the English-speaking world as Isak Dinesen. Focus on literary and philosophical paradoxes personified and articulated by enigmatic controversial author, who was acutely conscious Dinesen. Using memoirs, short fiction, and essays by Dinesen, interrogation of aesthetic theory, historiography and biography, feminist theory, postmodern and transnational theory. Secondary readings include texts by Bhabha, Gilbert and Gubar, JanMohamed, Kierkegaard, Nietzsche, Ngugi, Said, and Thurman. P/N or letter grading.


149A. Backgrounds of Scandinavian Literature. (4) Seminar, three hours. Readings and discussion of representative texts selected from literature of medieval, Renaissance, baroque, and Enlightenment periods. P/N or letter grading.

154. Romanticism. (4) Seminar, three hours. Exploration of Romanticism in Scandinavian literature. Reading and discussion of different approaches to Romanticism and analysis of works of prominent Scandinavian writers. Survey of romantic art and stand Scandinavian Romanticism in larger European context, including work from both English and German Romantic writers and artists. P/N or letter grading.


156. Scandinavian Literature of 20th Century. (4) Seminar, three hours. Readings and discussion of selected works of modern Scandinavian literature from beginning of century to present. P/N or letter grading.

157. Contemporary Nordic Literature. (4) Seminar, three hours. Reading and analysis of selected texts by major 20th-century Swedish authors. P/N or letter grading.

161. Introduction to Nordic Cinema. (4) Seminar, three hours. Introduction to history of cinema in Denmark, as well as to some fundamental concepts in study of film. Deliberately broad and historically conscious approach to development of cinema movement, and issues of auteur filmmaking. Filmmakers include auteurs in international canon, such as Victor Sjöström, Mauritz Stiller, and Ingmar Bergman, as well as other key Swedish filmmakers such as Gustaf Molander, Alf Sjöberg, Mai Zetterling, Vilgot Sjöman, Jan Troell, Lukas Moodysson, and Josef Fares. Development of Scandinavian high art cinema and popular genres such as rural romanticism, melodrama, sex, crime, and horror films have English subtitles. Concurrently scheduled with course C263A. P/N or letter grading.

163B. Introduction to Swedish Cinema. (4) Lecture, three hours. Introduction to and exploration of history of Swedish cinema. Focus on films produced by Swedish filmmakers, such as Victor Sjöström, Mauritz Stiller, and Ingmar Bergman, as well as key Swedish filmmakers such as Gustaf Molander, Alf Sjöberg, Mai Zetterling, Vilgot Sjöman, Jan Troell, Lukas Moodysson, and Josef Fares. Development of Scandinavian high art cinema and popular genres such as rural romanticism, melodrama, sex, crime, and horror films have English subtitles. Concurrently scheduled with course C263C. P/N or letter grading.

163C. Introduction to Norwegian Cinema. (4) Seminar, three hours. Introduction to and exploration of history of Norwegian cinema from silent era to present. Filmmakers include Tancred Ibsen, Arne Skouen, Edith Carlar, Nils Gaup, Erik Skjoldbjærg, Bent Harner, Khalid Hussain, and Petter Næss. Focus is on development of cinema and popular genres such as rural romanticism, melodrama, sex, crime, and horror films have English subtitles. Concurrently scheduled with course C263E. P/N or letter grading.

165B. Vikings on Film. (4) Seminar, three hours. Exploration of representations of Vikings in medium of film, considering Viking films within their historic and cultural contexts. How does representation of Vikings on film correspond to historical reality of Vikings? What representations of Vikings in films produced in Scandinavia differ from their representations in films from other cultures? How do we see changing ideas about gender, ethnicity, disability, sexual preference, and other aspects of identity reflected in Viking films? Development of Viking studies and close textual analysis skills. All readings and films in English or with English subtitles. P/N or letter grading.

C166A. Ingmar Bergman. (4) Seminar, three hours. Exploration of Ingmar Bergman’s development as film artist through various periods, spanning mid-1940s and late 1970s. Contextualization of work of this most personal of filmmakers within multiple frameworks of postwar Swedish film industry, Ingmar’s art cinema movement, and issues of auteur filmmaking. Course readings and viewing of 10 Bergman films. All films have English subtitles. Concurrently scheduled with course C266A. P/N or letter grading.

C166C. Carl Dreyer. (4) Formerly numbered 166C.) Seminar, three hours. Carl Theodor Dreyer (1889 to 1968) is not only one of great masters of Nordic cinema, but of world cinema as well. Focus on films that Dreyer made during near half century between 1919 and 1964. Contextualization of silent and sound
works of this most personal of filmmakers within multiple frameworks: Danish national film industry, transnational European cinema, and issues of auteur filmmaking. Writings by key Dreyer scholars such as David Bordwell, Ray Carney, Paul Schrader, Mark Sandberg, and others, as well as Dreyer's own writings on cinema. All films have English subtitles or subtitles. Concurrently scheduled with course C286C. P/NP or letter grading.

C171. Introduction to Scandinavian Folklore. (4) Seminar, three hours. Introduction to fairy tales and legends of Scandinavian tradition as well as to interpretive methodologies that strive to answer questions regarding art, structure, and meaning. May be concurrently scheduled with course C271. Letter grading.

C172A. Nordic Folk and Fairy Tales. (4) Seminar, three hours. Exploration of Nordic version of classic tale-types such as Dragon Slayer, Cinderella, Hansel and Gretel, and King Lindorm in historic and cultural contexts. Reading of important works of Nordic and international folktales scholarship, representing historical-geographic, structuralist, psychological, feminist, diaspora-theory, and queer-theory approaches. Development of critical thinking and close textual analysis skills, and understanding and appreciation of genre that continues to pervade popular culture. Reading in English translation. P/NP or letter grading.

C173A. Nordic Folk and Fairy Tales. (4) Seminar, three hours. Examination of popular culture in Scandinavia through study of contemporary Scandinavian literature, film, music, and art. Exploration of how issues such as globalization, immigration, and nationalism are portrayed in popular culture in Denmark, Norway, Sweden, Finland, and Iceland. Discussion of how and why human condition is interpreted through study of cultural expressions and how it is possible—taking literature, film, and art as point of departure—to analyze cultural, historical, and political expression in given piece of culture. P/NP or letter grading.

C174A. Minority Cultures in Scandinavia. (4) Seminar, three hours. Examination of emergence of immigrant cultures in Nordic region. Beginning in 1960s, large numbers of people from Turkey, Italy, and Pakistan began immigrating to Nordic countries, followed in subsequent decades by immigrants and refugees from Vietnam, India, Iran, Iraq, Afghanistan, Cambodia, and countries throughout Africa. Cultural landscape previously marked by relatively high degree of cultural homogeneity now characterized by broad cultural diversity. Examination of emergence of new voice in literature, film, and art. May be concurrently scheduled with course C274A. P/NP or letter grading.

C174B. Queer Scandinavia. (4) Seminar, three hours. Queer themes in Scandinavian literature, mainly from 19th and 20th centuries. Scandinavian countries have had more progressive view on homosexuality than most other countries, and Scandinavian writers portrayed homosexuality in explicit and radical ways as early as 19th century. Introductions to key theoretical works within field of gay and lesbian studies and queer studies, as well as presentation of historical view of how homosexuality has been perceived in Western world. P/NP or letter grading.

C175. Introduction to Sami Language and Culture. (4) Lecture, three hours. Use of thematically arranged, structurally graduated readings, conversation topics, individual and group assignments, and journal writing to promote understanding of linguistic characteristics of European cinema, and issues of auteur filmmaking. Writings by key Dreyer scholars such as David Bordwell, Ray Carney, Paul Schrader, Mark Sandberg, and others, as well as Dreyer's own writings on cinema. All films have English subtitles or subtitles. Concurrently scheduled with course C275. P/NP or letter grading.
C275. Introduction to Sami Language and Culture. (4) Lecture, three hours. Use of thematically arranged, structurally graduated readings, conversation topics, individual and group assignments, and journal writing to provide systematic overview of linguistic characteristics of Estonian language. At course end students should be able to communicate in Sami in variety of common social situations and should be equipped with necessary basic concepts to continue language acquisition and cultural studies in their social and professional milieu, interacting with native speakers, or taking formal courses at intermediate level. Concurrently scheduled with course C275S. S/U or letter grading.

C280. Literature and Scandinavian Society. (4) Seminar, three hours. Designed for graduate students. Discussion of selected aspects of Scandinavian society based on readings of contemporary literature as well as historical and/or sociological material. May be repeated for credit (as determined by graduate adviser) with topic change. May be concurrently scheduled with course C180. Graduate students may meet for extra seminar hours and write research papers of greater length and depth. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, not to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

396. Directed Individual Study or Research. (2 to 6) Tutorial, to be arranged with faculty member who directs the study or research. Limited to graduate Scandinavian students. Twelve units may be applied toward total course requirement, but only 4 units may be applied toward minimum graduate course requirement. May be repeated twice. S/U or letter grading.

597. Preparation for MA Comprehensive Examination or PhD Qualifying Examinations. (4 to 8) Tutorial, to be arranged with faculty member who directs the study or research. May be repeated once. May not be applied toward MA minimum course requirement. S/U grading.

599. Research for and Preparation of PhD Dissertation. (4) Tutorial, to be arranged with faculty member who directs the study or research. May be repeated. S/U grading.

Science Education

Interdisciplinary Minor College of Letters and Science

1037 Young Hall
Box 951569
Los Angeles, CA 90095-1569

310-794-2191
cateach.chem.ucla.edu
http://www.cateach.ucla.edu/?q=content/science-education-minor

Troy A. Carter, PhD, Co-Chair
Arlene R. Russell, PhD, Co-Chair

Faculty Committee

Troy A. Carter, PhD (Physics and Astronomy) Robert Cooper III, PhD (Education)
Jennifer A. Jay, PhD (Civil and Environmental Engineering, Environment and Sustainability)
Patricia E. Fitzpatrick, PhD (Integrative Biology and Physiology)
Arlene A. Russell, PhD (Chemistry and Biochemistry, Education)

Scope and Objectives

The Science Education minor is designed for students who wish to become middle school and high school science teachers or who plan to teach as graduate students in their disciplines. The minor provides a background in teaching and learning science and the broad general science background included in California State subject matter credential examinations, selected coursework required for entry into a variety of postbaccalaureate credential programs, and field experiences in the development, management, and teaching of science laboratory instruction in grades 7 through 12, including Advanced Placement Tests.

Undergraduate Study

Science Education Minor

Students eligible for admission to the Science Education minor should be making normal progress on the preparation for a major in the sciences or engineering whether they have declared such a major or not. They must have completed nine courses selected from the following, with at least one course from each of the four categories: (1) Chemistry and Biochemistry 14A, 14B, 14BL, 14C, 14CL (or 20A, 20B, 20L, 30L, 30AL), (2) Life Sciences 1, 2, 3 (or 7A, 7B, 7C), 23L, (3) Mathematics 3A, 31A or Life Sciences 30A, and (4) Physics 1A, 1B, 4A, 4L (or 5A, 5B, 5C). Prior participation in a supervised experience in schools is recommended.

To enter the minor, students must be in good academic standing with an overall grade point average of 2.0 or better. Students must consult with the academic coordinator responsible for the minor to plan a coherent program to complete both the minor and their major, prior to filling a petition to enter the minor.

Required Lower-Division Courses (6 to 7 units): Science Education 10SL and Earth, Planetary, and Space Sciences 1 (Earth, Planetary, and Space Sciences 101 or C113 or Atmospheric and Oceanic Sciences 101 or 102 or 103 may be substituted for course 1).

Required Upper-Division Courses (22 units minimum): (1) Education 127, (2) Science Education 100SL, (3) at least one and no more than two courses selected from Chemistry and Biochemistry 192A, 192B, Life Sciences 192A, 192B, Physics 192, Physiological Science 192, and (4) at least one and no more than two courses selected from Education M102, M103, M108, 121, 123, C125, 128, 130, 132, 133, 134, 138, 164, 166, M182A/M194A, M183A/M194A.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor, and at least 16 units must be taken in residence at UCLA.

Each minor course, except Science Education 10SL, must be taken for a letter grade, with a grade of C or better in each, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.
Science Education

Lower-Division Courses

1SL. Classroom Practices in Elementary School Science. (2) Seminar, 90 minutes; fieldwork, three hours. Recommended prerequisite: course 1SL. Introduction to prospective science teachers to field of elementary education and teaching and learning of science in elementary school classrooms. Pairs of students are placed in local elementary school classrooms to observe, participate, and assist mentor teachers in instruction. Introduction to inquiry-based learning practices, national and California standards, reading and learning differences in children, and cognitive ability of elementary-age children as it relates to introduction of concepts, curricular planning, classroom management, and learning assessment. P/NP grading.

10SL. Classroom Practices in Middle School Science. (2) Seminar, 90 minutes; fieldwork, three hours. Recommended prerequisite: course 1SL. Introduction for prospective science teachers to field of secondary education and teaching and learning of science in middle school classrooms. Pairs of students are placed in local middle school classrooms to observe, participate, and assist mentor teachers in instruction. Discussion of learning in middle school culture, cognitive development of students at this level, and best means to teach appropriate science concepts at this level. P/NP grading.

Upper-Division Course

100SL. Classroom Practices in High School Science. (3) Seminar, three hours; service learning fieldwork, three hours. Recommended prerequisite: course 1SL or 10SL. Introduction for prospective science teachers to field of secondary education and teaching and learning of science in high school classrooms. Pairs of students are placed in local high school classrooms to observe, participate, and assist mentor teachers in instruction. Discussion of learning in high school culture, cognitive development of students at this level, and best means to teach appropriate science concepts at this level. Letter grading.
Polish 102A, 102B, 102C, Romanian 102A, 102B, 102C, Serbian/Croatian 102A, 102B, 102C, or Ukrainian 102A, 102B, 102C OR any three courses from Russian 100A, 100B, 100C, 101A, 101B, 101C, 102A, 102B, 102C, 103A, 103B, 103C, 130A, 140A; (3) one three-quarter (12 to 15 units) introductory language sequence of a second Slavic or central European language, or equivalent proficiency as determined through departmental testing, to be selected from Czech 101A, 101B, 101C, Hungarian 101A, 101B, 101C, Polish 101A, 101B, 101C, Romanian 101A, 101B, 101C, Serbian/Croatian 101A, 101B, 101C, or Ukrainian 101A, 101B, 101C; (4) four three units (12 units) from the following list (187 courses are 2 units each; no more than 8 units may be from the 187 series): Central and East European Studies 125, 126, Czech 155, 187A through 187M, Ethnomusicology 161C, History 120A through 120D, Hungarian 187A through 187M, Polish 152A, 152B, 152C, 187A through 187M, Romanian 152, 187A through 187M, Russian 124G, Serbian/Croatian 187A through 187M, Ukrainian 152, 187A through 187M; one of the three courses may be selected from Russian M118, 119, 120, C124C, C124D, C124N, C124T.

During their senior year, students must also take Slavic 191TA, 191TB, and 191TC in which they complete a capstone senior thesis.

Students may petition to substitute courses after consulting with the undergraduate adviser. Each major course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better.

Russian Language and Literature BA

Preparation for the Major

Required: Russian 6 or 20 or equivalent proficiency, one course from 25, 25W, 90A, 90B, or 90BW.

Transfer Students

Transfer applicants to the Russian Language and Literature major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of Russian and one Russian civilization course.

To enter the minor students must be in good academic standing (2.0 minimum grade-point average) and file a petition with the department counselor in 322B Humanities Building, 310-825-3856.

Required Lower-Division Course (6 units): Central and East European Studies 91 or Slavic 90.

Required Upper-Division Courses (28 to 31 units): (1) One three-quarter introductory central and east European language sequence to be selected from Czech 101A, 101B, 101C, Hungarian 101A, 101B, 101C, Polish 101A, 101B, 101C, Romanian 101A, 101B, 101C, Serbian/Croatian 101A, 101B, 101C, or Ukrainian 101A, 101B, 101C (students who demonstrate sufficient fluency in one of these languages through departmental testing are exempt from this three-course sequence and must replace it with a minimum of 12 units of language courses from item 3); (2) one course dealing directly with the target culture to be selected from Central and East European Studies 125, 126, Czech 155, Ethnomusicology 161C, Gender Studies 185, History 120A through 120D, Polish 152A, 152B, 152C, Romanian 152, Russian C124G, Serbian/Croatian 154, or Ukrainian 152; (3) 12 units of second-year or higher-level language courses to be selected from Czech 102A, 102B, 102C, 187A through 187M, Hungarian 102A, 102B, 102C, 187A through 187M, Polish 102A, 102B, 102C, 187A through 187M, Romanian 102A, 102B, 102C, 187A through 187M, Serbian 102A, 102B, 102C, 187A through 187M, Ukrainian 102A, 102B, 102C, 187A through 187M, and/or literature courses selected from 102A, 102B, 102C, 103A, 103B, 103C, 107A, 107B, 107C, 108 (consult with the undergraduate adviser for appropriate placement); (2) three additional Russian language and/or literature courses selected from 102A, 102B, 102C, 103A, 103B, 103C, 107A, 107B, 107C, 108, M118, 119, 120, 121, 122, 124C, 124D, C124N, C124T, taken in addition to requirements for the major, that culminates in the submission of a thesis. In most circumstances the courses are taken in the senior year (fall, winter, and spring quarters).

To qualify for graduation with departmental honors, students must (1) complete all requirements for the major, (2) have a cumulative grade-point average of 3.5 or better in upper-division courses required for the major and an overall GPA of 3.0 or better, and (3) complete Slavic 198A, 191H, and 198B.

To qualify for graduation with departmental highest honors, students must (1) complete all requirements for the major, (2) have a cumulative grade-point average of 3.8 or better in upper-division courses required for the major and an overall GPA of 3.5 or better, and (3) complete Slavic 198A, 191H, and 198B with a grade of A in each course.

Honors and highest honors are recorded on the final transcript and diploma after students successfully complete the program.

Central and East European Studies Minor

The Central and East European Studies minor is designed for students who wish to augment their major program of study in the College of Letters and Sciences with exposure to a variety of disciplines pertinent to the study of central and eastern Europe, including language, literature, history, political science, folklore, ethnomusicology, and women's studies.

To enter the minor students must be in good academic standing (2.0 minimum grade-point average) and file a petition with the department counselor in 322B Humanities Building, 310-825-3856.

Required Lower-Division Course (6 units): Central and East European Studies 91 or Slavic 90.

Required Upper-Division Courses (28 to 31 units): (1) One three-quarter introductory central and east European language sequence to be selected from Czech 101A, 101B, 101C, Hungarian 101A, 101B, 101C, Polish 101A, 101B, 101C, Romanian 101A, 101B, 101C, Serbian/Croatian 101A, 101B, 101C, or Ukrainian 101A, 101B, 101C (students who demonstrate sufficient fluency in one of these languages through departmental testing are exempt from this three-course sequence and must replace it with a minimum of 12 units of language courses from item 3); (2) one course dealing directly with the target culture to be selected from Central and East European Studies 125, 126, Czech 155, Ethnomusicology 161C, Gender Studies 185, History 120A through 120D, Polish 152A, 152B, 152C, Romanian 152, Russian C124G, Serbian/Croatian 154, or Ukrainian 152; (3) 12 units of second-year or higher-level language courses to be selected from Czech 102A, 102B, 102C, 187A through 187M, Hungarian 102A, 102B, 102C, 187A through 187M, Polish 102A, 102B, 102C, 187A through 187M, Romanian 102A, 102B, 102C, 187A through 187M, Serbian 102A, 102B, 102C, 187A through 187M, and/or literature courses selected from 102A, 102B, 102C, 103A, 103B, 103C, 107A, 107B, 107C, 108 (consult with the undergraduate adviser for appropriate placement); (2) three additional Russian language and/or literature courses selected from 102A, 102B, 102C, 103A, 103B, 103C, 107A, 107B, 107C, 108, M118, 119, 120, 121, 122, 124C, 124D, C124N, C124T, taken in addition to requirements for the major, that culminates in the submission of a thesis. In most circumstances the courses are taken in the senior year (fall, winter, and spring quarters).

To qualify for graduation with departmental honors, students must (1) complete all requirements for the major, (2) have a cumulative grade-point average of 3.5 or better in upper-division courses required for the major and an overall GPA of 3.0 or better, and (3) complete Slavic 198A, 191H, and 198B.

To qualify for graduation with departmental highest honors, students must (1) complete all requirements for the major, (2) have a cumulative grade-point average of 3.8 or better in upper-division courses required for the major and an overall GPA of 3.5 or better, and (3) complete Slavic 198A, 191H, and 198B with a grade of A in each course.

Honors and highest honors are recorded on the final transcript and diploma after students successfully complete the program.
102B, 102C, 187A through 187M, Ukrainian 102A, 102B, 102C, 187A through 187M (187 courses are 2 units each) OR three courses dealing directly with any central and east European culture to be selected from Central and East European Studies 125, 126, Czech 155, Ethnomusicology 161C, Gender Studies 185, History 120A through 120D, Polish 152A, 152B, 152C, Romanian 152, Russian C124G, Ukrainian 152.

With approval of the undergraduate adviser, other related upper-division courses may be applied toward the minor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Russian Language Minor**

To enter the Russian Language minor, students must have an overall grade-point average of 2.0 or better.

**Required Lower-Division Courses (9 to 17 units):**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russian 6 or 20 or equivalent proficiency</td>
<td>2</td>
<td>First-year Russian courses for English proficient speakers of Russian. P/NP or letter grading.</td>
</tr>
<tr>
<td>Russian 100A, 100B, 100C</td>
<td>3</td>
<td>Introduction to the Russian language. P/NP or letter grading.</td>
</tr>
<tr>
<td>Russian 100A, 100B, 100C and additional Russian language or literature courses</td>
<td>3</td>
<td>Additional courses in Russian language or literature. P/NP or letter grading.</td>
</tr>
<tr>
<td>Russian 100A, 100B, 100C and additional Russian language or literature courses</td>
<td>3</td>
<td>Additional courses in Russian language or literature. P/NP or letter grading.</td>
</tr>
<tr>
<td>Five Russian language and literature courses</td>
<td>20</td>
<td>Total of 20 units applied toward minor requirements or another minor. P/NP or letter grading.</td>
</tr>
</tbody>
</table>

Students may petition to substitute courses after consulting with the undergraduate adviser. A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Russian Studies Minor**

To enter the Russian Studies minor, students must have an overall grade-point average of 2.0 or better.

**Required Lower-Division Courses (9 to 17 units):**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russian 3 or 10 or equivalent proficiency</td>
<td>2</td>
<td>First-year Russian courses for English proficient speakers of Russian. P/NP or letter grading.</td>
</tr>
<tr>
<td>Five courses in Russia-related fields, with a minimum of three courses selected from History M127A through 127D, Political Science 128A, 128B, 156A.</td>
<td>15</td>
<td>Three courses selected from History M127A through 127D, Political Science 128A, 128B, 156A. P/NP or letter grading.</td>
</tr>
</tbody>
</table>

Required Upper-Division Courses (20 units):

Five courses in Russia-related fields, with a minimum of three courses selected from History M127A through 127D, Political Science 128A, 128B, 156A.

Students may petition to substitute courses after consulting with the undergraduate adviser. A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

**Graduate Degrees**

The Department of Slavic, East European, and Eurasian Languages and Cultures offers Master of Arts (MA), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Slavic, East European, and Eurasian Languages and Cultures.

**Bulgarian**

**Upper-Division Courses**

101A-101B-101C, Elementary Bulgarian. (5–5–5) Lecture, five hours. Course 101A is recommended preparation for 101B, which is recommended preparation for 101C. Each course may be waived with consent of instructor. Beginning Bulgarian language courses with strong cultural component, P/NP or letter grading.

102A-102B-102C, Advanced Bulgarian. (4–4–4) Lecture, three hours. Recommended preparation: course 101C may be waived with consent of instructor. Course 102A is recommended preparation for 102B, which is recommended preparation for 102C. Each course may be waived with consent of instructor. P/NP or letter grading.


104. Intensive Advanced Bulgarian. (12) Lecture, 25 hours. Intensive advanced course in Bulgarian equivalent to courses 102A, 102B, 102C. Offered in summer only. P/NP or letter grading.

187A. Advanced Tutorial Instruction in Bulgarian. (2) Tutorial, one hour; laboratory, one hour. Enforced requisites: course 102C or Bulgarian placement test. Tutorial and guided independent study of advanced Bulgarian advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit. P/NP or letter grading.
Hungarian

Upper-Division Courses

101A-101B-101C. Elementary Hungarian. (4-4-4) Lecture, three to four hours. Course 101A is recommended preparation for 101B, which is recommended preparation for 101C. Each course may be waived with consent of instructor. Basic courses in Hungarian language. P/NP or letter grading.

102A-102B-102C. Advanced Hungarian. (4-4-4) Lecture, three hours. Recommended preparation: course 101C (may be waived with consent of instructor). Course 102A is recommended preparation for 102B, which is recommended preparation for 102C. Each course may be waived with consent of instructor. P/NP or letter grading.

152A-152B-152C. Survey of Hungarian Literature. (4-4-4) Lecture, three hours. Lectures and readings in English. Letter grading. 152A. From the Middle Ages to Neoclassicism. 152B. Remaking a Nation. Readings in 19th-century Polish literature and culture. 152C. Dreaming, Mocking, and Writing “as if.” Readings in modern Polish literature and culture.

187A. Advanced Tutorial Instruction in Hungarian. (2) Tutorial, one hour; laboratory, one hour. Preparation: prior course in sequence or Hungarian placement test. Tutorial and guided independent study of advanced Hungarian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

187B. Advanced Tutorial Instruction in Hungarian. (2) Tutorial, one hour; laboratory, one hour. Preparation: prior course in sequence or Hungarian placement test. Tutorial and guided independent study of advanced Hungarian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

187B-187M. Advanced Tutorial Instruction in Polish. (2 each) Tutorial, one hour; laboratory, one hour. Preparation: two years of Polish and/or Polish placement test. Tutorial and guided independent study of advanced Polish: advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

187M. Advanced Tutorial Instruction in Polish. (19) Tutorial, one hour; laboratory, one hour. Preparation: prior course in sequence or Polish placement test. Tutorial and guided independent study of advanced Polish: advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. Concurrently scheduled with course C280. P/NP or letter grading.

Graduate Course

C280. Variable Topics in Polish Literature. (4) Seminar, three hours. Reading knowledge of Polish recommended but not required. Topics include major writers, genres, or periods. May be repeated for credit with topic change. Concurrently scheduled with course C180. S/U or letter grading.

Polish

Upper-Division Courses

101A-101B-101C. Elementary Polish. (5-5-5) Lecture, five hours. Course 101A is recommended preparation for 101B, which is recommended preparation for 101C. Each course may be waived with consent of instructor. Basic courses in Polish language. P/NP or letter grading.

102A-102B-102C. Advanced Polish. (5-5-5) Lecture, five hours. Recommended preparation: course 101C (may be waived with consent of instructor). Course 102A is recommended preparation for 102B, which is recommended preparation for 102C. Each course may be waived with consent of instructor. P/NP or letter grading.

Lithuanian

Upper-Division Courses

101A-101B-101C. Elementary Lithuanian. (4-4-4) Lecture, five hours. Course 101A is recommended preparation for 101B, which is recommended preparation for 101C. Each course may be waived with consent of instructor. Basic courses in Lithuanian language. P/NP or letter grading.

102A-102B-102C. Advanced Lithuanian. (4-4-4) Lecture, three hours. Recommended preparation: course 101C (may be waived with consent of instructor). Course 102A is recommended preparation for 102B, which is recommended preparation for 102C. Each course may be waived with consent of instructor. Differences between oral and written discourse, expansion of students’ general and academic vocabulary, and increase of range of grammatical structures for use in speaking and writing. Cultural information to be included in readings. P/NP or letter grading.


152. Survey of Romanian Literature. (4) Lecture, three hours. Lectures and readings in English. Survey of Romanian literature from Middle Ages to present. P/NP or letter grading.

187A. Advanced Tutorial Instruction in Romanian. (2) Tutorial, one hour; laboratory, one hour. Enforced requisite: course 102C or Romanian placement test. Tutorial and guided independent study of advanced Romanian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

187B-187M. Advanced Tutorial Instruction in Romanian. (2 each) Tutorial, one hour; laboratory, one hour. Preparation: prior course in sequence or Romanian placement test. Tutorial and guided independent study of advanced Romanian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

Lower-Division Courses

1. Elementary Russian. (5) Recitation, five hours; laboratory, one hour. P/NP or letter grading.

2. Elementary Russian. (5) Lecture, five hours; laboratory, one hour. Requisite: course 1 or Russian placement test. P/NP or letter grading.

3. Elementary Russian. (5) Lecture, five hours; laboratory, one hour. Requisite: course 2 or Russian placement test. P/NP or letter grading.

4. Intermediate Russian. (5) Lecture, five hours; laboratory, one hour. Requisite: course 3 or Russian placement test. P/NP or letter grading.

5. Intermediate Russian. (5) Lecture, five hours; laboratory, one hour. Requisite: course 4 or Russian placement test. P/NP or letter grading.

6. Intermediate Russian. (5) Lecture, five hours; laboratory, one hour. Requisite: course 5 or Russian placement test. P/NP or letter grading.

10. Intensive Elementary Russian. (12) Lecture, 19 hours. Intensive basic course in Russian language equivalent to courses 1, 2, 3. P/NP or letter grading.

15A-15B. Accelerated Elementary Russian. (8-7) Recitation, five hours; laboratory, two hours. Material of first-year Russian course to be covered in two terms, with extensive use of language laboratory and the Russian Room. P/NP or letter grading.


25. Great Russian Novel. (5) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 25W. Designed for nonmajors. Knowledge of Russian not required. Study of major works by great 19th-century Russian novelists. P/NP or letter grading.

25W. Great Russian Novel. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or Basic Writing. S/U or letter grade. 36. Great Russian Novel. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or Basic Writing. S/U or letter grade. 36W. Great Russian Novel. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or Basic Writing. S/U or letter grade. 36W. Great Russian Novel. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or Basic Writing. S/U or letter grade.
a rising when literature is translated into cinema, and one national culture is viewed through the eyes of another. P/NP or letter grading.

31. Introduction to Russian Film. (5) Lecture, three hours; discussion, one hour; film screening, two hours. Key works, names, events, and concepts of Russian cinematic tradition, and culture. How cinema in Russia has created and contested narratives of history and identity, how cinema has served interests of state, and how it has defied them. P/NP or letter grading.

32. Russia and Asia: Cultural Dialogues. (5) Lecture, three hours; discussion, one hour. Since end of Soviet Union, cultural and political flux within non-Christian lands neighboring Russia has increased dramatically. Given radical rejection of Russian heritage in most former Soviet territories, key distinctions in humanities have become unclear, including fundamental conflict between limits of Slavic and Near Eastern studies. Examination of relation of Russia’s culture to its borders: Caucasus, Central Asia, China, and Japan. P/NP or letter grading.

90A. Introduction to Russian Civilization. (5) Lecture, three hours; discussion, one hour. Introduction to Russian culture and society from earliest times to 1917. P/NP or letter grading.

90B. Russian Civilization in 20th Century. (5) Lecture, three hours; discussion, one hour. Introduction to Russian culture and society from earliest times to 1917. P/NP or letter grading.

90B.W. Russian Civilization in 20th Century. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 90B and 90B.W. Survey of literature, theater, cinema, television, press, music, and arts. Emphasis on contemporary period, with constant reference to Russian and early Soviet antecedents. P/NP or letter grading.

103A-103B-103C. Russian Flagship Program Abroad: Introductory Russian. (4-4-4) Lecture, 19 hours. Enforced requisites: courses 101A, 101B, 101C or equivalent coursework as determined by department. Taught in Russian. Designed for students with high proficiency in Russian. Intensive advanced seven-week course in Russian language covering reading, writing, speaking, listening, and grammar. Russian film also included. Opportunity to interact with Russian speakers outside of class and serve as volunteers. Part of Russian Flagship Program Abroad. May not be repeated for credit. Offered in summer only. Letter grading.

111A-111B-111C. Russian Flagship Program Abroad: Superior Russian. (5-5-5) Lecture, three hours. Enforced requisite: course 110 or equivalent coursework as determined by department. Course 111A is enforced requisite to 111B, which is enforced requisite to 111C. Taught in Russian. Designed for students with advanced proficiency. Development of skills in formal interpersonal and presentational modes. Letter grading.

120. Literature and Revolution. (4) Lecture, three hours. Designed for juniors/seniors. Russian majors are advised to take this course in their sophomore year. Lectures and readings in English. Major works of the 20th century (Belyi, Pasternak, Bulgakov, Solzhenitsyn, and others) from prerevolutionary avant-garde to the present. P/NP or letter grading.

121. Russian Pop Culture. (5) Lecture, three hours. Designed for juniors/seniors. Lectures and readings in English. Overview of Russian popular culture today, with consideration of modern Russian popular culture and its influence on Russian and Western culture. Special emphasis on digital media in social sciences and culture, with emphasis on popular, digital, and hybrid forms. Offered in summer only. Letter grading.

122. Siberia. (5) Lecture, three hours. Introductory survey in which current cultural and ecological issues are situated in their geographical and historical background, including analysis of Siberian human geography before first contact with European colonizers and development of modes of interaction among different cultural groups. Reading in English of selection of literary works by well-known 20th-century Siberian writers whose texts serve as point of close examination of Siberian regional literature and ecological network within which it exists. Letter grading.


124D. Studies in Russian Literature: Dostoevsky. (4) (Formerly numbered 124D.) Lecture, three hours. Lectures and readings in English. In-depth reading of major fictional works such as Crime and Punishment, The Brothers Karamazov. Concurrently scheduled with course C224D. P/NP or letter grading.
phasis on images of women expressed in this tradition as compared with those found in works of contemporary male writers. P/NP or letter grading.


129. Animation and Music Video. (5) Lecture, three hours; discussion, one hour. Designed for juniors and seniors. Lectures and readings in English. Humanities recently have passed through so-called visual turn: traditional emphasis on language(s) in field have been reconsidered in light of society's increasingly visual working. New attitude toward our own changing culture (i.e., toward its future) has equal value if applied retrospectively to multiple cultures of one erstwhile empire. In territory where many tongues or traditions needed to be ironed out, visual often plays special role in social cohesion. Because of past politics and today's profit-driven events, small fickle forms of visual desire(s), different forms of social existence as other side of world departed from path marked out by largest nation to show how cinema struggled under hours. Overview of most popular art form in world's grading.

Lectures and readings in Russian. P/NP or letter grading.

130A-130B-130C. Russian Poetry. (4-4-4) Lecture, three hours. Preparation: third-year Russian recommended. Lectures and readings in Russian. May be repeated for credit with topic and/or instructor change. 130A. Introduction to Analysis of Russian Poetry. Role of biography, cultural subsets, rhetoric, and form in interpretation of texts. 130B. Poetry of Russian Neo-classicism, Romanticism, and Realism. Major works of late 18th and 19th centuries in their historical and cultural contexts. 130C. Russian Poetry in the 20th Century. Major poetic schools from early modernism (symbolism, futurism, acmeism) to contemporary avant-garde.

131. History of Russian Cinema. (4) Lecture, three hours. Overview of film as form in world's largest nation to show how cinema struggled under incipient capitalism in Russia, how moviemaking on other side of world departed from path marked out by Hollywood and London, how films operate as form of nationwide persuasion, relationship between word and image in those acts of persuasion, how even frightening dogma cannot escape importance of audience desire(s), different forms of social existence as refuge from both capitalism and communism, and what values of world's biggest country are. Role of language in self-definition. Is selfhood verbal or visual matter? P/NP or letter grading.

M132. Comparative Media Studies. (4) (Same as Comparative Literature M132.) Lecture, three hours. History, form, and function of various media. Grounded in political and commercial experience of Eastern Europe, comparative investigation of media technologies, today's burgeoning markets, and today's tragic abuses. Development of media form(s) and content across various times, places, and cultures, with special attention to Slavic phenomena. Letter grading.


167A. Advanced Tutorial Instruction in Russian. (2) Tutorial, one hour; laboratory, one hour. Enforced require: course 102C or Russian placement test. Tutorial and guided independent study of advanced Russian: advanced conversation, composition, vocabulary, and selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

187B-187M. Advanced Tutorial Instruction in Russian (3 to 5) Lecture, three hours. Preparation: prior course in sequence or Russian placement test. Tutorial and guided independent study of advanced Russian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

191. Variable Topics Research Seminars: Russian Literature. (4) Seminar, three hours. Require: course 6. Reading and discussion of selected authors; culminating seminar paper required. May be repeated for credit with topic and/or instructor change. P/NP or letter grading.

Graduate Courses

201A-201B-201C. Russian: Vocabulary, Pronunciation, Style. (4-4-4) Lecture, three hours. Require: course 102C. Conducted in Russian. Reading and analysis of texts with focus on vocabulary, pronunci-ation, and style, respectively, in three consecutive terms. S/U or letter grading.


211A. Literature of Medieval Rus'. (4) Lecture, three hours. Require for MA (literature). Survey of the literature from its beginning through the Kievan and Muscovite periods up to end of the 17th century.


212A-212B. 19th-Century Russian Literature. (4-4) Lecture, three hours. S/U or letter grading.


212B. Age of Realism. Lecture, three hours. Require for MA (literature). Survey devoted to emergence of critical and psychological realism, beginning with early works of Turgenev, Gorchakov, and Dostoevsky, moving to major novels of Tolstoy, Dostoevsky, and Saltkov-Shchedrin, and concluding with works of the presymbolist period, especially short stories of Chekhov, S/U or letter grading.

213A. 20th-Century Russian Literature, 1890 to 1929. (4) Lecture, three hours. Require for MA (literature). Lectures and readings in major literary trends of modernist period, such as decadence, symbolism, futurism, acmeism, and ornamental school. Analysis of representative works by Blok, Belyi, Khlevnikov, Pasternak, Platonov, and others. S/U or letter grading.


C224D. Studies in Russian Literature: Dostoevsky. (4) Lecture, three hours. Lectures and readings in English. In-depth reading of major fictional works such as Crime and Punishment, Notes from the Underground, and The Brothers Karamazov. Concurrently scheduled with course C124D. S/U or letter grading.


C224P. Studies in Russian Literature: Pushkin. (4) Lecture, three hours. Lectures and readings in English. Major works in all genres, including lyric poetry, narrative poems, plays, prose fiction, and selected letters. Concurrently scheduled with course C124P. S/U or letter grading.

C224T. Studies in Russian Literature: Tolstoy. (4) Lecture, three hours. Lectures and readings in English. Early and late stories and novellas, excerpts from the diaries and one major novel such as War and Peace or Anna Karenina. Concurrently scheduled with course C124T. S/U or letter grading.

C240. Russian Folklore. (3 to 5) Lecture, three hours. Lectures and readings in English. General introduction to Russian folklore, including survey of genres and related folkloric phenomena. Concurrently scheduled with course C170. S/U or letter grading.


270. Russian Poetics. (4) Lecture, three hours. Introduction to technical study of Russian poetics and ver-ificat, with attention to metrics, stanza forms, rhyme, and development of various verse types from the 18th into the 20th century.

C277. Studies in Russian Literature: Nabokov. (4) Lecture, three hours. Lectures and readings in English. Russian novelist (The Gift, American novelist (Lolita), autobiographer (Speak Memory), and critic. Concurrently scheduled with course C124N. S/U or letter grading.

292. Seminar: 19th-Century Russian Literature. (4) Seminar, three hours. Require: courses 212A, 212B. Selected authors and works from 19th-century poetry, prose, and drama. May be repeated for credit with consent of instructor and graduate adviser.

293. Seminar: 20th-Century Russian Literature. (4) Seminar, three hours. Require: courses 212A, 212B. Selec-ted authors and works from 20th-century poetry, prose, and drama. May be repeated for credit with consent of instructor and graduate adviser. S/U or letter grading.


296. Seminar: History of Russian Culture. (4) Dis-cussion, three hours. Reading and discussion on se-lected topics in history of Russian culture.
Serbian/Croatian

Upper-Division Courses
101A-101B-101C. Elementary Serbian/Croatian. (5-5-5) Lecture, five hours. Course 101A is recommended preparation for 101B, which is recommended preparation for 101C. Each course may be waived with consent of instructor. Basic courses in Serbian/Croatian. P/NP or letter grading.

102A-102B-102C. Advanced Serbian/Croatian. (4-4-4) Recommended preparation: course 101C may be waived with consent of instructor. Course 102A is recommended preparation for 102B, which is recommended preparation for 102C. Each course may be waived with consent of instructor. P/NP or letter grading.


154. South Slavic Literature. (4) Lecture, three hours. Lectures and readings in English. Survey of South Slavic literature from Middle Ages to the present. May be repeated for credit with topic change. P/NP or letter grading.

187A. Advanced Tutorial Instruction in Serbian/Croatian. (2) Tutorial, one hour; laboratory, one hour. Enforced requisite: course 102C or Serbian/Croatian placement test. Tutorial and guided independent study of advanced conversational, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

187B-187M. Advanced Tutorial Instruction in Serbian/Croatian. (2 each) Tutorial, one hour; laboratory, one hour. Preparation; prior course in sequence or Serbian/Croatian placement test. Tutorial and guided independent study of advanced Serbian/Croatian; advanced composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

Slavic

Lower-Division Courses
5. Introduction to Eurasia. (5) Lecture, three hours; discussion, four hours. Survey of shared, and sometimes separate, elements of culture and civilization throughout Eurasia. May be repeated for credit. S/U or letter grading.


Upper-Division Courses
CM114. Teaching and Learning of Heritage Languages. (4) (Same as Asian CM124 and Near Eastern Languages 121TC.) Lecture, three hours. Consideration of issues relevant to heritage language learners (HLLs) and to heritage language instruction. Readings and discussion on such topics as definitions of HLLs and HLLs; linguistic, demographic, sociolinguistic, and sociocultural aspects of HLLs. HLL groups most represented among UCLA students; institutional and instructor attitudes toward HLLs; impact of student motivation and expectations on HLL teaching; conditions; similarities and differences between HLLs and foreign language learners (FLs) regarding teaching methods and materials; diagnostic testing and needs analysis; use of oral/aural proficiency as springboard for literacy instruction; optimization of instruction of mixed HL and FL classes. Action research component included. Concurrently scheduled with course CM214. P/NP or letter grading.

191H. Senior Honors Thesis in Slavic Languages and Literatures. (4) Seminar, three hours. Limited to senior departmental majors. Planning and development of senior honors capstone thesis. Introduction to research methods and presentation skills; use of student target language for oral/aural presentation and written presentations required. P/NP or letter grading.

191TA. Senior Capstone Thesis in Slavic Languages and Literatures. (4) Seminar, three hours. Limited to senior departmental majors. Planning and completion of senior capstone thesis. Introduction to research methods and presentation skills; use of student target language for oral/aural presentation and written presentations required. P/NP or letter grading.


192A-198B. Honors Research in Slavic Languages and Literatures. (4-4) Tutorial, three hours. Course 198A is requisite to 198B. Limited to senior departmental honors program students. Development and completion of a senior research project under the direct supervision of faculty member. Independent contract required. Letter grading.

199. Directed Research in Slavic Languages and Literatures. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses
200A. Literary Proseminar. (4) Seminar, three hours. Required for MA (literature). Designed to prepare incoming graduate students for scholarly work by introducing them to resources (departmental, intramural, and extramural), methodologies, and techniques for analysis of literary materials and cultural studies. Letter grading.


201. Introduction to Old Church Slavic. (4) Lecture, three hours. Required for MA (linguistics, literature). Introduction to phonology and grammar; readings.


CM214. Teaching and Learning of Heritage Languages. (4) (Same as Asian CM224 and Near Eastern Languages 221TC.) Lecture, three hours. Consideration of issues relevant to heritage language learners (HLL) and to heritage language (HL) instruction. Readings and discussion on such topics as definitions of HLLs and HLLs; linguistic, demographic, sociolinguistic, and sociocultural profile of HLLs, particularly HL groups most represented among UCLA students; institutional and instructor attitudes toward HLLs; impact of student motivation and expectations on HL teaching; conditions; similarities and differences between HLLs and foreign language learners (FLs) regarding teaching methods and materials; diagnostic testing and needs analysis; use of oral/aural proficiency as springboard for literacy instruction; optimization of instruction of mixed HL and FL classes. Action research component included. Concurrently scheduled with course CM214. S/U or letter grading.

M229. Introduction to Slavic Bibliography. (2) (Same as Information Studies M229C.) Introduction to Slavic and East European bibliography for the humaniti- ies and social sciences. Determined by requirements and background of enrolled students. Topics include library terminology and concepts; survey of languages and translation systems; acquisition of Slavic and Near Eastern scholarship in the West; relevant reference sources, archival resources, and research methods; survey of online data bases; compilation of bibliographies. S/U grading.

230A-230B-230C. Topics in Comparative Slavic Literature. (4-4-4) Lecture, three hours. Recommended preparation: upper-division courses in Czech, Polish, Russian, and Yugoslav literatures. Two terms required for Ph.D. (may be repeated for credit with consent of instructor and graduate adviser.) 230A, Middle Ages through Baroque. 230B. Classicism to Romanticism. 230C. Realism to Modernism.


281. Seminar: Slavic Linguistics. (4) Seminar, three hours. Selected topics in comparative and historical Slavic linguistics. May be repeated for credit with consent of instructor and graduate adviser.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation, assistance personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.
**Ukrainian**

**Upper-Division Courses**

101A–101B–101C. Elementary Ukrainian. (5-5-5) Lecture, five hours. Course 101A is recommended preparation for 101B, which is recommended preparation for 101C. Each course may be repeated with consent of instructor. Basic courses in Ukrainian language. P/NP or letter grading.

102A–102B–102C. Advanced Ukrainian. (4-4-4) Lecture, three hours. Recommended preparation: course 101C (may be waived with consent of instructor). Course 102A is recommended preparation for 102B, which is recommended preparation for 102C. Each course may be waived with consent of instructor. Development of advanced listening, speaking, reading, and writing skills. P/NP or letter grading.

152. Ukrainian Literature. (4) Lecture, three hours. Lectures and readings in English. Survey of writers, literary trends, and issues in Ukrainian literature from the late 18th century to the present. Special attention to works of such major figures as Kotyaryevsky, Shevchenko, Franko, Ukrainka, and Tychyna.

C190. Variable Topics in Ukrainian Literature. (4) Seminar, three hours. Reading knowledge of Ukrainian recommended but not required. Topics include major writers, genres, or periods. May be repeated for credit with topic change. Concurrently scheduled with course C280, S/U or letter grading.

**SOCIAL SCIENCE**

**Interdepartmental Program**

**College of Letters and Science**

2500 Public Affairs Building
Box 957174
Los Angeles, CA 90095-7174
310-825-3565
http://mass.ss.ucla.edu

Juliet A. Williams, PhD, Chair

**Faculty Committee**

Lorrie A. Frasure-Yokely, PhD (Political Science)
Tim J. Groening, PhD (Communication)
Marcus A. Hunter, PhD (African American Studies, Sociology)
Davide Panagia, PhD (Political Science)
Michael E. Shin, PhD (Geography)
James W. Stigler, PhD (Anthropology, Psychology)
Abel Valenzuela, Jr., PhD (Chicana and Chicano Studies, Urban Planning)
Juliet A. Williams, PhD (Gender Studies)
Min Zhou, PhD (Asian American Studies, Sociology)

**SCOPE AND OBJECTIVES**

The Division of Social Sciences is home to leading researchers working to advance understanding of human societies around the globe. With over 250 faculty members housed in more than 15 departments and programs, the division encourages students to explore diverse perspectives and approaches to the study of social life.

The Social Science Interdepartmental Program offers the Master of Social Science (MSS) self-supporting degree. Drawing from current theories, methods, and professional practices from across the social sciences, students develop proficiency with quantitative and qualitative research methods used to address complex social problems. The intensive one-year curriculum emphasizes creative problem-solving and collaborative research practices. Graduates will be prepared for academic and professional careers.

**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

**GRADUATE DEGREE**

The Social Science Program offers a self-supporting Master of Social Science (MSS) degree.

**SOCIAL THOUGHT**

**Interdisciplinary Minor**

**College of Letters and Science**

A316 Murphy Hall
Box 951430
Los Angeles, CA 90095-1430
310-206-2792
jedwards@college.ucla.edu
http://www.socialthought.ucla.edu/socialthoughtminor.htm

Jeffrey Prager, PhD, Chair

**Faculty Committee**

Stefan Bargheer, PhD (Sociology)
Barbara Herman, MA, PhD (Law, Philosophy)
Russell Jacoby, PhD (History)
Jeffrey Prager, PhD (Sociology)
Melvin L. Rogers, PhD (African American Studies, Political Science)
Peter J. Stacey, PhD (History, Italian)

**SCOPE AND OBJECTIVES**

The Social Thought minor provides an opportunity for students to take a series of courses that focus on modern social and intellectual thought from the 17th through the 20th century. The minor builds on lower-division introductory exposure to the history of modern ideas as embodied in a number of key texts by significant thinkers such as Descartes, Hobbes, Locke, Smith, Rousseau, Wollstonecraft, Mill, Marx, Weber, Darwin, Nietzsche, Freud, DuBois, de Beauvoir, and others and promotes more intense and broad exposure to the great ideas and modern thinkers of the contemporary world. It culminates with enrollment in a two-term senior thesis tutorial related to a theme from previous coursework and closely supervised by a faculty mentor. The senior thesis occurs in conjunction with a weekly research colloquium where students meet with faculty members to discuss their senior thesis work or related work in the minor.

The minor is intended to supplement the liberal arts education of undergraduates who, through their major, are interested in finding an area of specialization related to career objectives and who seek broad and systematic training in the major ideas of the modern world.

**UNDERGRADUATE STUDY**

**SOCIAL THOUGHT MINOR**

The Social Thought minor is limited to students who formally apply and are admitted. To apply, students must submit an application, a personal statement supporting their interest in pursuing the minor, a letter of recommendation from a faculty mentor, and a transcript to the College Academic Counseling Office, A316 Murphy Hall.

To enter the minor, students must have an overall grade-point average of 2.0 or better and apply for admission only after successfully completing the following lower-division requirements: Clusters 21A and 21B, OR two courses from German 56, Honors Collegium 20, 21W, 55, 57, 83W, Philosophy 6, Political Science 10, Sociology 10.
Social Welfare / 625


Required Research Colloquia and Senior Thesis (12 units): Students must also complete Social Thought 190A and 199A in one term and courses 190B and 199B in the following term. A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Social Thought

Upper-Division Courses

190A-190B. Research Colloquia in Social Thought I, II. (2-2) Seminar, two hours. Corequisite for course 190A: course 199A; for 190B: course 199B. Limited to juniors/seniors. Required of students in Social Thought minor. Designed to bring together students undertaking supervised senior thesis work in seminar setting with one or more faculty members to discuss their work or related work in Social Thought minor. Led by one supervising faculty member. Course 190A may be repeated for credit. P/NP grading.

199A-199B. Directed Research or Senior Thesis in Social Thought I, II. (4-4) Tutorial, to be arranged. Corequisite for course 199A: course 199A; for 199B: course 199B. Limited to juniors/seniors. Required of students in Social Thought minor. Supervised individual research under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit; individual contract required. Letter grading.

SOCIAL WELFARE

Meyer and Renee Luskin School of Public Affairs

3357 Public Affairs Building
Box 951566
Los Angeles, CA 90095-1656
310-825-2892
sw@luskin.ucla.edu
http://luskin.ucla.edu/social-welfare

Laura S. Abrams, PhD, Chair and Director
MSW Program
Aurora P. Jackson, PhD, Chair, Doctoral Program
Gerardo P. Laviña, LCSW, MSW, Director, Field Education

Professors

Laura S. Abrams, PhD
David Cohen, PhD (Marjorie Crump Professor of Social Welfare)
Tod M. Franke, PhD
Aurora P. Jackson, PhD
Mark S. Kaplan, DrPH
Paul M. Ong, PhD
Ananya Roy, PhD
Fernando M. Torres-Gil, PhD

Professors Emeriti

Rosina M. Becerra, PhD
A.E. Benjamin, PhD
Diane S. de Anda, PhD
Yeheskell Hasfenfeld, PhD
Doris S. Jacobsen, PhD
Stuart A. Kirk, DSW (Marjorie Crump Professor Emeritus of Social Welfare)
Barbara J. Nelson, PhD
Alex J. Norman, DSW
Jack Rothman, PhD
Robert F. Schilling, PhD
Leonard Schneiderman, PhD

Associate Professors

Alfreda P. Igehart, PhD
Lene F. Levy-Storms, PhD
Ailee Moon, PhD

Assistant Professors

Ian W. Holloway, PhD
Leyla Karimli, PhD
Laura Wray-Lake, PhD

Adjunct Professor

Jorja J. Leap, PhD

Scope and Objectives

The primary objectives of the Department of Social Welfare graduate program are to prepare leaders for the profession of social work and to develop the empirical base for all facets of practice. In response to changing demographic trends and the emergence of new social problems, the department provides leadership in the areas of policy, practice, and research and in the development of an innovative curriculum for training students and professionals to meet the service needs of a multicultural clientele.

The educational program is based on the premise that all students need to acquire a common body of knowledge and basic skills, and a common understanding of the philosophy and values of the profession. These then form a sound foundation for the development of more specialized knowledge and skills along the lines of each student’s interests and the needs of the field.

Students are encouraged to take advantage of the resources within the University by selecting elective courses in related disciplines. In addition, as a department within the Luskin School of Public Affairs, the program affords students instructional opportunities in the other affiliated departments—Public Policy and Urban Planning.

Beyond national opportunities in the profession of social work, there is increasing demand for qualified and experienced social workers to serve in the international field, where many social service programs are conducted under the auspices of the United Nations, the U.S. government, and national sectarian organizations. Graduates of the doctoral program generally secure appointments at major universities or research centers.

The challenge to the department, the profession, and those who join us as students is to prepare to forge the paths, build the bridges, and shape the future to ensure that all individuals, families, and communities enjoy better education, better health, better job training, and better economic futures.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees


Social Welfare

Upper-Division Courses

100A. Introduction to Social Welfare: Policies and Programs. (4) Lecture, four hours. Origin and development of major U.S. social welfare programs and policies; their social, political, and economic context; and their impact on social, political, and economic processes. Credit not given for both 100A and 100B. P/NP or letter grading.

100B. Social Welfare Policy: Overview. (4) Lecture, four hours. Requisite: course 100A. Review of existing policy regarding major social issues in field of social welfare. Examination of discrepancy between need and capacity of social agencies to address need. Exploration of differential impact of policy on various populations. P/NP or letter grading.

101. Social Welfare in Multicultural Society. (4) Lecture, four hours. Social policy viewed from perspective of various cultural groups. Students to become aware of their own cultural perspective and learn to recognize similarities and differences in perspectives. Examination of beliefs across cultural groups. P/NP or letter grading.


103. Introduction to Direct Practice with Individuals, Families, and Groups. (4) Lecture, four hours. Requisite: courses 100A, 100B. Conceptual and practical foundation of direct social work practice via casework process. Students practice these skills in written, role-play, small group, and video or audio exercises. P/NP or letter grading.

M104C. Diversity in Aging: Roles of Gender and Ethnicity. (4) Same as Chicana and Chicano Studies M104C, Gender Studies M104C, and Gerontology M104C. Lecture, four hours. Exploration of complexity of variables related to diversity of aging population and variability in aging process. Examination of gender and ethnicity within context of both physical and social aging, in multidisciplinary perspective utilizing faculty from variety of fields to address issues of diversity. Letter grading.

M104D. Public Policy and Aging. (4) Same as Gerontology M104D. Lecture, four hours. Examination of theoretical models and concepts of policy process, with application to aging policy. Analysis of decision-making processes that affect aging policy. Description of...
tion of history of contemporary aging policy. Exploration of current policy issues affecting elderly. P/NP or letter grading.

M104E. Social Aspects of Aging. (4) Same as Gerontology M104E. Lecture, four hours. Topics include theories of aging, roles and responsibilities, social relationships, and special populations. Weekly seminars organized around key aspect of social gerontology. P/NP or letter grading.

105. Social Welfare Policy in Modern America: Historical Perspectives. (4) Lecture, three hours; outside study, nine hours. Historical overview of American social policy dealing with three core societal problems: poverty, sickness, and joblessness. Programs developed to address these problems have typically been public insurance programs or cash transfers such as unemployment insurance, welfare, and Social Security. Collectively these programs are known as “the welfare state”; examination of origins of the U.S. welfare state, its development over time, and features that make it distinctive as compared to welfare states in other nations. Letter grading.

106. Research Seminar and Field Observation: Social Welfare. (4) Seminar, three hours; discussion, one hour; outside study, eight hours. Didactic component with focus on development of basic skills in the areas of research and development of one field of observation (module) from a number of field settings. P/NP or letter grading.

107. Field Practicum: Social Welfare. (4) Lecture, three hours; outside study, eight hours. Didactic component with focus on development of basic skills in the areas of research and development of one field of observation (module) from a number of field settings. P/NP or letter grading.

M108. Biomedical, Social, and Policy Frontiers in Human Aging. (5) Same as Gerontology M108. Lecture, four hours; outside study, eight hours. Didactic component with focus on development of basic skills in the areas of research and development of one field of observation (module) from a number of field settings. P/NP or letter grading.

130A. Poverty, Poor, and Welfare Policy. (4) Seminar, three hours. Limited to juniors/seniors. Current research and policy issues concerning poverty in the U.S., with specific emphasis on single-parent households. Overview of measurements and characteristics of poverty, programs and policies to ameliorate conditions of poverty; historical overview of major social welfare policies to combat poverty, particularly Aid to Families with Dependent Children (AFDC) and Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA); and critical appraisal of recently enacted state welfare reform policies. Relationship between research knowledge about poverty and current policies, and effects of poverty on child and adult patterns of poverty and policy responses. P/NP or letter grading.

132. Community Analysis and Community Needs. (4) Lecture, three hours. Limited to juniors/seniors. Theoretical and practical foundation for understanding and depicting demographic composition of communities and for determining community needs. Use of systems theory and organizing framework. Community-level interventions are affected by community’s social ecology, culture, economic system, political system, ethnic composition, and class structure. Agencies often define community needs and develop interventions to respond to those needs. Knowledge of community infrastructure necessary for ascertaining its strengths and resources that can be mobilized for addressing community needs, issues, and concerns. Social service agencies and communities can work together in partnership to enhance quality of community life. P/NP or letter grading.

140. Introduction to Study of Aging. (4) Same as Psychology M140. Lecture, three hours. Designed for juniors/seniors. Perspectives on major features of human aging—biological, social, psychological, and humanistic. Introduction to professional careers in aging and influences on aging to prepare students for subsequent specialization. P/NP or letter grading.

142SL. Intergenerational Communication across Lifespan. (4) Same as Gerontology M142SL. Lecture, three hours; fieldwork, one hour. Limited to juniors/seniors. What do you say to your parents in conversation? How do you talk to your grandparents? Does your family talk well to one another as group? How do you communicate well with boss who is 30 years older than you? Individuals of all ages interact with one another, and their interactions have significance throughout human life. Examination of psychological, interpersonal, and societal issues related to intergenerational communication across lifespan. Letter grading.


162. Health Policy and Services. (4) Seminar, three hours. Limited to juniors/seniors. Contemporary issues in healthcare financing and delivery and historical perspective on these issues. Role of government in healthcare and ways controversy about this role continues to shape public policy in health. Major public programs, notably Medicare and Medicaid, and their relationship to issues of access and cost for diverse vulnerable populations. Various public and private approaches to healthcare reform and ways of thinking about their predicted impact, cost, and political feasibility. Issues in care of persons with chronic illness and debate about public and private approaches to long-term care reform. Social work roles in healthcare policy and practice. P/NP or letter grading.

163. Prevention of Risky Substance Use and Related Problems. (4) Lecture, four hours. Limited to juniors/seniors. Prevention of substance use and related harms (such as crime and mental health disorders) and effectiveness of interventions to reduce these problems. Through review of science-based programs and policies, evaluation of effectiveness of evidence-based interventions, to increase student knowledge, skills, and expertise in determining effective interventions to reduce drug-related harm, using most up-to-date information. P/NP or letter grading.

164. HIV Prevention in U.S. and Developing World. (4) Lecture, three hours. Limited to juniors/seniors. Examination of various approaches to HIV prevention, drawing on infectious disease paradigms from public health and theories of behavior change from fields of psychology, sociology, and communications. Sexual behavior and injection drug use, existing and promising technologies to reduce HIV transmission, and fiscal, cultural, ethical, and moral dilemmas in allocation of prevention resources and political responsibility.

M165. Disability Policy and Services in Contemporary America. (4) Same as Disability Studies M130 and Gerontology M165. Lecture, three hours. Limited to juniors/seniors. Growing numbers of people of all ages with disabilities are living productive lives in American communities. Many others are struggling to lead such lives. Who are people with disabilities in contemporary America? How has U.S. responded over time to various needs and aspirations of people with disabilities, young and old? What demands have been made over time by disability advocates and the government to increase opportunities for those with disabilities? What do we know about extent to which public policies and programs are responsive to people in need? How do demographics, economics, and politics contribute to influence evolving public policy responses? P/NP or letter grading.

181. Nonprofit Sector, State and Civil Society. (4) Lecture, three hours; outside study, nine hours. Use of political economy perspective to analyze forces that have shaped rise and characteristics of nonprofit sector and its constituent elements. Examination of social history of nonprofit sector in U.S. Exploration of legal and policy environment and organizational forms. Comparative perspective between U.S. and other countries. P/NP or letter grading.

191. Variable Topics Research Seminars: Social Welfare. (4) Seminar, three hours; outside study, nine hours. Corequisite: course 194. Not open to freshmen. Introduction to topics relevant to psychosocial determinants of child welfare, the role of community, and community resources for children and families, with opportunity to gain breadth and depth of knowledge in seminar setting. May be repeated for credit; P/NP grading.

192. Internship Seminars: Social Welfare. (1) Seminar, one hour; outside study, three hours. Course restrictions: course 194. Not open to freshmen. Introductory course in community-based child health and advocacy. Students learn about community resources for children and families through service learning experience and work with pediatric patients and families in UCLA pediatric unit. Students meet on regular basis with instructor and provide didactic and interactive lectures to pediatric patients and families in UCLA pediatric unit. Students meet on regular basis with instructor and provide didactic and interactive lectures to pediatric patients and families in UCLA pediatric unit. Students meet on regular basis with instructor and provide didactic and interactive lectures to pediatric patients and families in UCLA pediatric unit. May be repeated for credit. Individual contract with supervising faculty member required. Letter grading.
199. Directed Research in Social Welfare. (2 or 4) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

201A-201B-201C. Dynamics of Human Behavior. (3-3-3) Lecture, three hours. Biopsychosocial factors associated with individual and group behavior and development as social functions of individuals and groups. Emphasis on theoretical issues and research evidence that contribute to unified theory of human development. Letter grading.

202A-202B-202C. Dynamics of Human Behavior. (4-4) Lecture, two and one half hours. Requisites: courses 201A, 201B. Deviations and pathologies or stresses in physical, emotional, and social areas of human functioning as those problems relate to role and function of social workers. S/U or letter grading.

203A-203B-203C. Integrative Seminars. (4-4-4) Seminar, two and one half hours. Integrative courses that bring together theory and practice of social work in various fields relevant to practice. Includes identification of problem areas and populations-at-risk requiring further examination. S/U or letter grading.


205. Cross-Cultural Awareness. (4) Lecture, two hours; discussion, two hours. Designed to aid students in development of professional perspectives that will allow them to work effectively with members of myriad cultural groups, to discuss with clarity alternative concepts of culture in determination of individual behavior responses, and to identify their own personal cultural values and assumptions. S/U or letter grading.

M206A. Homelessness: Housing and Social Service Issues. (4) (Same as Urban Planning M270.) Lecture, 90 minutes; discussion, 90 minutes; one field trip. Review of current status of homelessness: who homeless; where services and housing are available, existing and proposed programs—appropriate architecture, management, and sources of funding. Outside speakers include providers of services to homeless. Letter grading.


210B. Foundations of Social Work Practice II. (4) Lecture, two and one half hours. Corequisite: course 401B. Weighing and carrying out evidence-supported practices based on differential assessment of people and their situations, with particular focus on focusing intervention approaches: case management, motivational interviewing, crisis intervention, cognitive, task-centered, and solution-focused therapies, as well as interventions for family functioning, small group processes, and environmental modification (advocacy and community organization). Continued evaluation of outcomes. Letter grading.

210C. Foundations of Social Work Practice III. (4) Lecture, two and one half hours. Corecourse: course 401C. Core concepts of social work practice in organizational, community, and policy settings. Exploration of leadership style and development of personalized group work skills. Role of macro practice in agency-based social work in advancing strategies of organizational and social change. Interface and interaction among policy decisions, community needs, and program development. How societal values influence formation, implementation, and evaluation of social welfare policies, programs, and services. Analysis of social, economic, and political context of community practice and its impact on policy.


211B. Human Behavior in Social Environment: Theoretical Perspectives in Social Work and Social Welfare II. (4) Lecture, two and one half hours. Emphasis on critical issues in social welfare policies, particularly those pertaining to provision of services to homeless. Letter grading.


213A. Social Welfare Research Methods. (4) Lecture, two and one half hours; discussion, one hour. Introduction to various research methodologies, including experimental and quasi-experimental designs, survey research methods, qualitative methods, and single subject and group-based research designs. Exploration of ethical issues pertaining to social welfare and social science research. Students learn and practice formulating research problems, research questions, and hypotheses and learn how to critically review theory and research. Measurement, sampling procedures, and basic descriptive statistics. Letter grading.

213B. Applied Statistics in Social Welfare. (4) Lecture, two and one half hours; discussion, one hour. Core statistics research methods taught in course 213A, and designed to help students develop basic understanding of descriptive and inferential statistical approaches. Introduction to statistical reasoning, with emphasis on how statistics can help us understand world. Topics include numerical and graphical summaries of data, data acquisition and experimental design, probability, hypothesis testing, confidence intervals, correlation, and regression. Letter grading.

214A. Foundations of Social Welfare Policy. (4) Lecture, two and one half hours. Overview of key areas of social welfare policy. Roots of American social welfare policy and how they have given rise to today’s social policy structure. Path of social welfare policy development, birth of profession of social work and how it has paralleled major social policy issues from early colonial present day. Specific events and important individuals that have influenced public policy affecting vulnerable populations, such as racial and ethnic minorities, women, children, the poor, and others. The role of policy and the influence of role of social research in informing social welfare policy. Letter grading.


220. History and Philosophy of Social Welfare. (2) Discussion, two hours. History of social work as field: body of knowledge, method and process, and point of view analyzed within context of economic, political, social, philosophical, and scientific climate of period. S/U or letter grading.

M221A. Foundations of Social Welfare Policy. (4) (Same as Public Policy M260 and Urban Planning M260.) Lecture, two and one half hours. Nature, roles, and history of welfare institutions in different societies; applicable social system theory of different components of welfare system; theory and research about welfare policy and organizational forms. S/U or letter grading.

221B. Social Welfare Policy and Services II. (4) Lecture, three hours; outside study, nine hours. Understanding of significant theoretical constructs and resultant critical evidence dealing with how organizations develop and maintain their internal functions. Development of beginning skill in organizational analysis. Special attention to organizational analysis of social welfare services. S/U or letter grading.

222A-222B. Foundations of Social Welfare. (2-2) Lecture, two hours; discussion, one hour. Overview of history of social work profession and how social justice has shaped its underpinnings and influenced social policy that affects profession’s primary fields of practice. How social work profession has addressed social service needs of racial and ethnic populations. In Progress (222A) and S/U or letter (222B) grading.

222C. History. Five weeks in fall quarter. 222B. Policy. Five weeks in spring quarter. Requisite: course 222A.


225A-225B. Social Welfare Policy. (4-4) Seminar, three hours. Designed for PhD students. Letter grading.

225A. Formulation and Analysis. (4) Seminar, three hours. Designed for PhD students. Examination of political issues in public policy formulation, and adoption of U.S. social welfare policies, with particular focus on income distribution and redistribution. Emphasis on analysis of social policy issues and conceptual frameworks for policy analysis.

225B. Implementation and Evaluation. (4) Seminar, three hours. Designed for PhD students. Examination of issues in implementation and evaluation of social welfare policies, particularly those pertaining to provision, organization, and delivery of social services, including auspices funding, distribution, criteria for effectiveness, and use of quantitative methods in policy analysis. Letter grading.

229A. Craft of Social Welfare Scholarship I. (4) Lecture, three hours; outside study, nine hours. Limited to PhD students. Exploration of one problem for study—its history, current state of knowledge about what problem exists, and how it might be done about it. Survey of several problems and alternative ways in which problems have been conceptualized and studied to understand how scholars use theory and empirical evidence to advance what is known, what is yet unknown, where there are important gaps in understanding particular problems, and what might be done to solve them. Letter grading.

229B. Craft of Social Welfare Scholarship II. (4) Lecture, three hours; outside study, nine hours. Continued exploration of one problem for study, after hours. Enforced requisite: course 229A. Limited to PhD students. Continued narrowing of student focus on one social welfare research problem, moving from understanding evolution of problem to more detailed and intensive review of research literature on specific researchable question to deepen
student understanding of existing knowledge on topic and begin to identify one or more critical gaps in knowledge to explore. Discussion of different methods of summarizing research literatures, identifying seminal studies, and interpreting contradictory findings. Regular meetings to discuss ongoing work and to encourage students to review their work with their faculty advisers and/or other mentors with expertise in their problem areas. Letter grading.

229C. Credit/No Credit Social Welfare Scholarship III. (2) Lecture, 90 minutes; outside study, four and one half hours. Enforced requisite: course 229B, Limited to PhD students. Focus on craft of scholarly writing for publication and on helping students develop effective narrative frame for presentation, make choices about extent of detail and shape of literature review, and achieve cogent presentation and conclusion. Consideration of elements of effective professional writing. Letter grading.

230A-230B-230C. Theory of Social Welfare Practice with Individuals, Families, and Groups I, II, III. (2-2-2) Lecture, three hours; corequisite: required social work practicum. Advanced-level, critical analysis of role of social work with individuals and small groups and to principles of practice that are derivative of this and related theory. S/U or letter grading.

231A-231B-231C. Advanced Theory of Social Welfare Practice with Individuals, Families, and Groups IV, V, VI. (4-4-4) Lecture, three hours; outside study, nine hours. Corequisite: required social work practicum. Advanced-level, critical analysis of theories, values underpinning social work casework practice. Special attention to deviation and stress as conditions affecting functioning of individuals and groups and to diagnostic knowledge and competencies required in rehabilitation and prevention. S/U or letter grading.

231E. Advanced Theory of Social Welfare Practice with Individuals, Families, and Groups: School Social Work. (4) Lecture, three hours; outside study, nine hours. Corequisite: required social work practicum. Advanced-level, critical analysis of various theories that are consistent with knowledge and values of social work practice. Design of direct interventions applicable to most common mental health problems and barriers to service delivery for this vulnerable population, such as stigma, criminalization, cultural bias, and gaps in knowledge. S/U or letter grading.


231N. Advanced Theory of Social Welfare Practice with Individuals, Families, and Groups: Children, Adolescents, and Families. (4) Lecture, three hours; outside study, nine hours. Corequisite: required social work practicum. Advanced-level, critical analysis of theoretical models related directly to practice with diverse population of older adults. Presentation of comprehensive tools for multidimensional geriatric assessment. How to engage in collaborative treatment planning across range of late-life problems and address impediments to intervention process. Theoretical underpinnings and most effective practice models to enable students to serve needs of older adults as they adjust to late-life transitions, as well as to health and mental health problems most prevalent for older adults. Client populations range from well elderly to physically frail and from diverse background. S/U or letter grading.

231P. Advanced Theory of Social Welfare Practice with Individuals, Families, and Groups: Gerontology. (4) Lecture, three hours; outside study, nine hours. Corequisite: required social work practicum. Advanced-level, critical analysis of theoretical models related directly to practice with diverse population of older adults. Presentation of comprehensive tools for multidimensional geriatric assessment. How to engage in collaborative treatment planning across range of late-life problems and address impediments to intervention process. Theoretical underpinnings and most effective practice models to enable students to serve needs of older adults as they adjust to late-life transitions, as well as to health and mental health problems most prevalent for older adults. Client populations range from well elderly to physically frail and from diverse background. S/U or letter grading.

240A-240B. Theory of Social Welfare Practice in Organizations, Communities, and Policy Settings I, II. (3-3) Lecture, three hours. Corequisite: required social work practicum. Historical and theoretical developments in administration, planning and community organization; understanding the community as a social system; administration of organizations; role of the practitioner in community organization; evaluation of needs, existing programs, policies, structures and strategies of intervention. Letter grading.

241A-241B-241C. Advanced Theory of Social Welfare Practice in Organizations, Communities, and Policy Settings IV, V, VI. (4-4-4) Lecture, three hours; outside study, nine hours. Corequisite: required social work practicum. Emphasis on various patterns of community action for attaining social welfare objectives; research and field experience directed toward study of social problems within context of community planning; emerging patterns of physical, economic, and social planning within framework of social change theory. S/U or letter grading.

2421. Leadership, Development, and Governance of Nonprofit Organizations. (4) Same as Public Policy M247 and Urban Planning M290. Lecture, three hours; outside study, nine hours. Designed for graduate students. Techniques and processes of organization and management of substantial social welfare problems at community level. This form of community practice fills niche between professional and knowledge and skill set possessed by agency and program administrators on one hand and by policy analysts and policymakers on other. Letter grading.


241H. Advanced Theory of Social Welfare Practice in Organizations, Communities, and Policy Settings: Human Service Organizations. (4) Lecture, three hours; outside study, nine hours. Corequisite: required social work practicum. Conceptual framework and analytic tools provided to understand organizational structures of human service organizations work on people to improve, sustain, or prevent decline of well-being. Because of their function these organizations have special attributes that distinguish them from other organizations and examination of these attributes, theoretical perspective to study them, and analysis of factors that shape nature of work they do. Explanation of determinants of relations between workers and clients by looking at various variables as policy environment, values and mission, internal structure, service technology, reward structure, organizational responses to staff and client diversity, and power relations between workers and clients. S/U or letter grading.

241I. Advanced Theory of Social Welfare Practice in Organizations, Communities, and Policy Settings: Grant Writing. (4) Lecture, three hours; outside study, nine hours. Corequisite: required social work practicum. Process of grant writing, with emphasis on learning necessary skills to construct functional grant proposals. Application of problem-solving knowledge to identification of funding opportunities and various steps in writing grant proposals and opportunity to design/prepare grant proposals. S/U or letter grading.

241J. Advanced Theory of Social Welfare Practice in Organizations, Communities, and Policy Settings: Community Practice. (4) Lecture, three hours; outside study, nine hours. Corequisite: required social work practicum. Designed to deepen student knowledge and skills about community practice and theoretical base that supports these methods in field of social welfare. Theory, practice, and research methods related to major community practice approaches in
context of evidence-based philosophies and processes. Development of skills to address community problems using best available data by applying course concepts to student projects. S/U or letter grading.


245A. Epistemology of Practice. (4) Seminar, three hours. Designed for PhD students. Guiding scientific models of practice theories; process of emergence, development, and change of practice theories; intellectual foundations of practice theories; how professionals learn, apply, accumulate, and modify their practice knowledge; science and practice interplay. Letter grading.

245B. Models of Social Work Practice Research. (4) Seminar, three hours. Designed for PhD students. Research for practice, with major emphasis on methods of intervention research that seek to design, test, evaluate, and disseminate innovative intervention techniques. Letter grading.

249A-249B-249C. Foundations of Social Inquiry I, II, III. (4-4-4) Lecture, three hours; outside study, nine hours. Required for PhD students. Introduction to underlying logics of social inquiry to provide students with building blocks for independent scholarship. Letter grading. 249A. Experimental and quasi-experimental approaches to intervention research, ways of assessing and measuring effectiveness, and strategies related to research design, sampling, conclusion validity, and inferring causality. 249B. Enforced requisite: course 249A. Survey design, sampling strategies and external and construct validity, methods of data collection, and reliability as measurement issue. 249C. Enforced requisite: course 249B. Introduction to array of qualitative research strategies.

251A. Advanced Theory of Social Welfare Practice: Domestic and Sexual Violence. (4) Lecture, three hours. Designed for second-year MSW students. Introduction to substance abuse, family, and community violence through social work practice experiences on the local, state, and national levels. Letter grading.


258E. Research in Gerontology. (4) Lecture, three hours. Overview of research in aging. Development of research questions, selecting appropriate theoretical frameworks, research design, implementation of research, and evaluation of research results. Letter grading.

258F. Research in Health. (4) Lecture, three hours. Conducted for graduate students. Research in area of health policy and services. Discussion of readings about range of research problems relevant to health services research, consideration of alternative roles for social work practitioners in arena of health services research. Letter grading.

258G. Research in Mental Health. (4) Lecture, three hours. Conducted for graduate students. Research in area of mental health policy and services. Discussion of research questions, selecting appropriate theoretical frameworks, research design, implementation of research, and evaluation of research results. Letter grading.


258I. Research in Youth Populations. (4) Lecture, three hours. Conducted for graduate students. Research methods as applied to problems, issues, and interventions pertaining to youth populations. Instruction and experience in applying experimental and quasi-experimental designs, survey research methods, ethnographic methods, single-subject designs, and observational methods. Operational definition of variables and selection and design of appropriate measures for research with children and adolescents. Letter grading.

258A. Survey of Research Methods. (4) Seminar, three hours. Basic concepts underlying research methods. Content includes theoretical and conceptual approaches to research problem formulation; research design, including experimental, comparative, and survey; sampling; statistical methods; methods of observation and techniques of data analysis. Letter grading.

258B. Advanced Research Methods. (4) Seminar, three hours. Advanced concepts underlying research methods. Continuing study of theoretical and conceptual approaches to research problem formulation; re- search design, including experimental, comparative, and survey; sampling; statistical methods; methods of observation and techniques of data analysis. Letter grading.

258C. Research Internship. (4) Fieldwork, four hours. Supervised study and training through participation in ongoing research project or one initiated by students and carried out under faculty supervision, enabling students to apply research skills developed in prior courses. May be repeated for credit. S/U grading.

258A-290B-290C. Seminars: Social Work. (4-4-4) Seminar, three hours; outside study, nine hours. Series of seminars dealing with trends in social work and social welfare, with focus on current social problems affecting individuals, groups, and communities and new patterns of intervention based on recent demonstrations and research. S/U or letter grading.

258O. Children with Special Healthcare Needs: Systems Perspective. (4) Same as Community Health Sciences M240 and Health Policy M240). Lecture, three hours; fieldwork, one hour. Examination and evaluation of principles, programs, and practices that have evolved to identify, assess, and meet special needs of infants, children, and adolescents with developmental disabilities or chronic illness and their families. Letter grading.

258Q. Child Welfare Policy. (4) Same as Public Policy M212.) Lecture, three hours. Development of social policy as it affects families and children from different cultural backgrounds and as it is formed in the context of child welfare policy development. Discussion of an infrastructure to support needs of children and families. S/U or letter grading.

258K. Mental Health Policy. (4) Same as Public Policy M213.) Lecture, three hours. Examination of regulation of social policy for the mentally ill, with emphasis on political, economic, ideological, and societal factors that affect views of mental illness and services they are provided. S/U or letter grading.

2590L. Poverty, Poor, and Welfare Reform. (4) Same as Public Policy M214 and Urban Planning M246.) Lecture, three hours. Major policy and research issues concerning poverty and social welfare policy directed toward poor in U.S. S/U or letter grading.

2590M. Health Policy. (4) Same as Public Policy M215.) Lecture, three hours. Introduction to contemporary issues in healthcare financing and delivery, providing historical perspectives of these issues. Examination of major public programs and their relationship to issues of access and cost. S/U or letter grading.

2590N. Public Policy for Children and Youth. (4) Same as Public Policy M216.) Lecture, three hours. Policy issues that affect children and adolescents in relation to their interaction with schools and community, with emphasis on impact of policy across federal, state, and local levels. S/U or letter grading.

2590P. Aging Policy, Elderly and Families. (4) Same as Public Policy M261.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Examination of the emerging field and concepts of policy process and application to aging policy. Analysis of decision-making processes that af-
The minor in Society and Genetics provides a rigorous interdisciplinary education in current issues at the intersection of human biology, genetics, and society, where bridging the institutional divide between the life sciences and human sciences (humanities and social sciences) is necessary.

The teaching strategy emphasizes the value of synthetic, integrative thinking. Learning can best be organized synthetically around the social science knowledge and skills required to investigate and address such problems rather than by building up by the stepwise sequences of traditional disciplines. Preparation for the majors is centered on three areas of study that together prepare students to solve problems at the intersection of biology and society: genes and gene expression; human evolutionary biology; and society, diversity, and identity. The majors provide an important integrative space where different ways of knowing in the human and life sciences are explored, interrelated, and applied. Core and capstone courses emphasize problem-based learning about pressing issues that inextricably link society, culture, and biology, such as medical privacy rights, gene patents, regulation of stem cell research, and questions of race, gender, and identity. Programmatically, the majors consist of required elements that develop critical thinking skills, knowledge, and excellence in written and oral communication; elective concentrations that allow students to focus on a particular emerging research area at the intersection of biology and society; and extracurricular involvement in academic research and corporate/community internship. The mission is to educate students who become leaders in diverse areas such as law, medicine, humanities, social sciences, and biological sciences, and to have them interact and work together to form a deep understanding of the issues at the intersection of human social systems, evolutionary biology, and genetics.

The minor in Society and Genetics provides undergraduate students with the opportunity to understand and probe the complex problems and possibilities presented by modern genetics, with special attention to their social context and content. Given the dynamic interaction between genetics and the social world, the minor is of necessity multidisciplinary and emphasizes a collaborative cross-disciplinary approach to instruction in the core courses of the minor and exposure to a wide range of disparate scholarship through elective courses available in such areas as anthropology, biology, history, philosophy, public policy, and sociology.

SOCIETY AND GENETICS, INSTITUTE FOR
Center for Interdisciplinary Instruction
College of Letters and Science
3360 Life Sciences
Box 957221
Los Angeles, CA 90095-7221
310-267-4990
socgen@socgen.ucla.edu
http://socgen.ucla.edu

Hannah L. Landecker, PhD, Director
Jessica W. Lynch Alfaro, PhD, Vice Chair
Undergraduate Education

Professors
Michael A. Alfaro, PhD
Soraya de Chadarevian, PhD
Wayne W. Grody, MD, PhD
Margie G. Haselton, PhD
Christopher M. Kelty, PhD
Russell Korobkin, JD
Hannah L. Landecker, PhD
Christina G.S. Palmer, PhD, in Residence
Janet S. Sinahomer, PhD
Stefan Timmermans, PhD

Professors Emeriti
Joan B. Silk, PhD
Matthew Norton Wise, PhD

Associate Professors
Allison B. Carruth, PhD
Jessica W. Lynch Alfaro, PhD
Aaron L. Panofsky, PhD
Undergraduate Study

Human Biology and Society BA Admission

Admission to the Human Biology and Society BA major is by application and competitive, using courses, grades, grade-point averages, and personal statements as minimum standards for consideration. Only a limited number of students are admitted each year. Applicants are not automatically accepted into the major.

Students must apply for major standing at the beginning of spring quarter of their sophomore year. Applications submitted after the spring quarter deadline are considered during fall quarter of the junior year only as space in the program permits. No applications are considered after fall quarter of the junior year.

Premajor standing is not required to apply for the major. A copy of the major application is available on the department website.

Human Biology and Society Premajor

Incoming freshmen may be admitted as premajors on acceptance to UCLA. All other students must first complete Society and Genetics 5, M71A, or M72A, and then contact the undergraduate counselor in 3360 Life Sciences for additional information regarding transfer options.

Preparation for the Major

Required Core: One course from Society and Genetics 5, M71A, or M72A.

Also required are Anthropology 1, Chemistry and Biochemistry 14A, Life Sciences 1 and 2 OR 7A, 7B, and 7C, Statistics 10 or 13, and two social theory courses from American Indian Studies M10, Anthropology 3, Asian American Studies 20, Chicana and Chicano Studies 10A, 10B, Clusters M1A through M167, Global Studies 100A, 100B, Honors Collegium 177, Life Sciences 107, Philosophy 124, 125, 137, 150, 153A, 154B, 155, C156, 157A, 157B, 170, Psychology 187C, Public Policy 103, Social Welfare 162, Society and Genetics M102, 120, 121, 130, 131, M133, M140, 160, 161, 162, 163, 164, 165, 175, 180, 188, 195CE, 197, 199, Sociology 143, 154, 156, 170. See below for additional course options in the subfocus areas of cell development, microbiology and immunology, molecular biology and genomics, physiology, and psychology and mental health.


Historical and Social Studies of Science: Anthropology 100, 131, 143, Asian American Studies 105, Bioengineering 165EW, Disability Studies 101 or 101W, M121, Ecology and Evolutionary Biology 100, 120, C126, 130, 175, Environmental Health Sciences 100, C185A, C185B, Epidemiology 100, Gender Studies M14, M162, M164, M180B, Geography M109, M115, Global Studies 100A, 100B, History M151C, 179A, 179B, 180A, 180C, Honors Collegium 177, Human Genetics C144, Life Sciences 107, Neurobiology M169, Philosophy 124, 125, 129, 130, 137, 155, Society and Genetics M102, 120, 121, 130, 131, M133, M140, M144, 160, 161, 162, 163, 164, 165, 175, 180, 188, 195CE, 197, 199, Sociology M138, 143, M148, 154, 156, 170. See below for additional course options in the subfocus areas of cell development, microbiology and immunology, molecular biology and genomics, physiology, and psychology and mental health.


Each course must be taken for a letter grade and passed with a grade of C- or better, and all courses must be completed with a cumulative minimum grade-point average of 2.0.

Optional Subfocus Areas

The subfocus options are designed and recommended for students who intend a career in medicine or allied health services or are planning to go on to graduate school in the life or health sciences. Students may select any subfocus option listed in their concentration area and complete three subfocus courses that may then be used to satisfy as many as three of the five courses required in their concentration area.

Cell Development: Molecular, Cell, and Developmental Biology 138, 165A, 168

Ecology and Evolutionary Biology: Three courses from Anthropology 124P, 124S, 126Q, 128P, Ecology and Evolutionary Biology 100, 116, 120, 121, C126, 129, 130, C135, 175, 176

Microbiology and Immunology: Microbiology, Immunology, and Molecular Genetics 101, 185A, and one course from 103AL, 106, 107, 158, or 169

Molecular Biology and Genomics: Molecular, Cell, and Developmental Biology 144, 172, and one course from CM156, Human Genetics CM124, C144, Microbiology, Immunology, and Molecular Genetics C122, or 158

Physiology: Physiological Science 11A, 111B, and one course from 147, 149, or 177

Society and Genetics, Institute for / 631

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.
Human Biology and Society BS Admission
Admission to the Human Biology and Society BS major is by application and competitive, using courses, grades, grade-point averages, and personal statements as minimum standards for consideration. Only a limited number of students are admitted each year. Applicants are not automatically accepted into the major.

Students must apply for major standing at the beginning of spring quarter of their sophomore year. Applications submitted after the spring quarter deadline are considered during fall quarter of the junior year only as space in the program permits. No applications are considered after fall quarter of the junior year.

Premajor standing is not required to apply for the major. A copy of the major application is available on the department website.

Human Biology and Society Premajor
Incoming freshmen may be admitted as premajors on acceptance to UCLA. All other students must first complete Society and Genetics 5, M71A, or M72A, and then contact the undergraduate counselor in 3360 Life Sciences to request premajor standing.

Preparation for the Major
Required Core: One course from Society and Genetics 5, M71A, or M72A.

Also required are Anthropology 1; Chemistry and Biochemistry 14A, 14B, 14BL, 14C, 14D (or 20A, 20B, 20L, 30A, 30AL, 30B); Mathemat- ics 3A, 3B, 3C, and Statistics 10 or 13, or Mathematics 31A, 31B, 32A, and Statistics 10 or 13, or Life Sciences 30A, 30B, and Statistics 13; Physics 1A, 1B, 1C, 4AL, 4BL (or 5A, 5B, 5C); and two social theory courses from American Indian Studies M10, Anthropology 3, Asian American Studies 20, Chicana and Chicano Studies 10A, 10B, Clusters M1A through 80CW, Gender Studies 10, Geography 3, History 3C, Molecular, Cell, and Developmental Biology 40, 50, 60, Philosophy 4, 6, 8, 22 or 22W, Public Policy 10A, Society and Genetics 85, Sociology 1, M5.

Students must also complete one of two life sciences sequences—either Life Sciences 1, 2, 3, 4, and 23L OR 7A, 7B, 7C, and 23L. They may not substitute courses in either sequence.

Each course must be taken for a letter grade, and students must complete all premajor courses with a cumulative minimum grade-point average of 2.5.

Transfer Students
Transfer applicants to the Human Biology and Society BS major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of general biology with laboratory for majors, preferably equivalent to Life Sciences 1 and 2 OR 7A, 7B, and 7C, one year of calculus, one year of general chemistry with laboratory for majors, and one semester of organic chemistry with laboratory.

Transfer applicants must also complete at least two of the following introductory courses prior to admission to UCLA: one statistics course, one anthropology human evolution course, and two introductory social sciences or history courses. A second semester of organic chemistry or one year of calculus-based physics is strongly recommended but not required for admission. Society and Genetics 5 must be taken at UCLA once a transfer student is admitted to the University.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major
Required: Life Sciences 107 (if Life Sciences 2A, 2B, 2C, and 2D are taken); Society and Genetics 102, 105A, 105B, 108; 4 units from course 195CE, 196, or 199; and five courses (at least one of which must be a society and genetics course) from one of the following concentration areas:


Each course must be taken for a letter grade and passed with a grade of C– or better, and all courses must be completed with a cumulative minimum grade-point average of 2.0.

Optional Subfocus Areas
The subfocus options are designed and recommended for students who intend a career in medicine or allied health services or are planning to go on to graduate school in the life or health sciences. Students may select any subfocus option listed in their concentration area.
and complete three subfocus courses that may then be used to satisfy as many as three of the five courses required in their concentration area.

Cell Development: Molecular, Cell, and Developmental Biology 138, 165A, 168
Ecology and Evolutionary Biology: Three courses from Anthropology 124P, 124S, 126Q, 128P, Ecology and Evolutionary Biology 100, 116, 120, 121, C126, 129, 130, C135, 175, 176
Microbiology and Immunology: Microbiology, Immunology, and Molecular Genetics 101, 185A, and one course from 103AL, 106, 107, 158, or 168
Molecular Biology and Genomics: Molecular, Cell, and Developmental Biology 144, 172, and one course from CM156, Human Genetics CM124, C144, Microbiology, Immunology, and Molecular Genetics C122, or 158
Physiology: Physiological Science 111A, 111B, and one course from 147, 149, or 177
Population Genetics: Two courses from Ecology and Evolutionary Biology C135, Human Genetics CM124, Society and Genetics 120, and one course from Ecology and Evolutionary Biology 120, 121, or Human Genetics C144

Honors Program
To receive departmental honors, students must take each course in the major for a letter grade and complete all upper-division courses in the major with an overall grade-point average of 3.5 or better. For highest departmental honors, students must also take Society and Genetics 197 or 199 in which they write a research paper in their major concentration area and receive a grade of A or better.

Society and Genetics Minor
Admission to the Society and Genetics minor is by application and competitive, using courses, grades, grade-point averages, and personal statements as minimum standards for consideration. Applicants must be in their junior year and have an overall grade-point average of 2.5 or better. Only a limited number of students are admitted each year. Applicants are not automatically accepted into the minor.

Students must apply for admission to the minor at the beginning of fall quarter of their junior year. No applications are considered after that.

Information about the application process is available on the minor website and by consultation with the undergraduate counselor in 3360 Life Sciences.

Required Upper-Division Courses (30 to 34 units): Society and Genetics 101 (or, if Life Sciences 4 or 107 has been completed, one course from the approved list of electives), M102, 191S, and at least four additional upper-division elective courses (minimum 16 units) from the approved list.


Students may petition to have a course not on the approved list applied toward the four-course elective requirement. Contact the undergraduate counselor in 3360 Life Sciences.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade of C– or better. Successful completion of the minor is indicated on the transcript and diploma.

Society and Genetics Lower-Division Courses

5. Integrative Approaches to Human Biology and Society (8) Lecture, three hours; discussion, one hour. Introduction to concept of problem-based approaches to study of biology and society and areas of concentration, such as bioethics and public science policy, evolutionary biology, culture, and behavior, historical and social studies of life sciences, medical genetics and public health, and population genetics and history, and central thematic issues shared across concentrations, such as commercialization of life shape and public understanding of science. Letter grading.

M71A-M71B-M71CW. Biotechnology and Society. (6-6-6) (Same as Clusters M71A-M71B-M71CW) Course M71A is enforced requisite to M71B, which is enforced requisite to Clusters, first-year freshmen. Letter grading. M71A-M71B. Lecture, three hours; discussion, two hours. Exploration of methods, applications, and implications of biotechnology and of ethical, social, and political implications as well as biological underpinnings. M71CW, Special Topics. Seminar, three hours. Enforced requisite: course M71B. Topics include in-depth examination of ethics and human genetics, bioweapons and biodefense, sex and biotechnology. Satisfies Writing II requirement.

M72A-M72B-M72CW. Sex from Biology to Gendered Society. (6-6-6) (Same as Communication M72A-M72B-M72CW; Clusters M72A-M72B-C72CW, and Sociology M72A-M72B-M72CW) Course M72A is enforced requisite to M72B, which is enforced requisite to M72CW. Limited to first-year freshmen. Letter grading. M72A-M72B. Lecture, three hours; discussion, two hours. Examination of many ways in which sex and sexual identity shape and are shaped by biological and social forces, approached from complementary perspectives of anthropology, biology, medicine, and sociology. Specific topics include biological origins of sex differences, intersex, gender identity, gender inequality, homosexuality, sex differences, sex and politics of sex research. M72CW, Special Topics. Seminar, three hours. Enforced requisite: course M72B. Topics may include politics of reproduction, sexuality, sexual identity, social construction of gender, and reproductive technologies. Satisfies Writing II requirement.

85. Critical Study of Health, Sickness, and Healing in Global Perspective. (4) Lecture, three hours. Introduction to sociocultural, historical, and global study of health and sickness. Use of student of globally important infectious and chronic diseases (diabetes, HIV/AIDS) to analyze factors, including key dimensions of diversity (class, gender, urban/rural development) that influence how population variably encounter, experience, understand, and cope with sickness. Special focus on relationships between Western medicine and traditional and alternative approaches to healing. Letter grading.

Upper-Division Courses

101. Genetic Concepts for Human Sciences. (5) Lecture, three hours; discussion, one hour. Not open to students with credit for Life Sciences 4. Focused treatment of selected complex genetic concepts from molecular biology, population and quantitative genetics, and evolutionary biology, with emphasis on gene-environment interactions and at various levels and culminating in exploration of notion of co-evolution of genetics and society. Basic science concepts presented through real-world issues and relevant problems. Course is open to students interested in cancer, immune system and development, and how this research is performed and adds to knowledge. Letter grading.

M102. Societal and Medical Issues in Human Genetics. (5) (Same as Human Genetics CM136C) Lecture, three hours; discussion, two hours. Sequence of entire human genome is now known. Consideration of how this knowledge impacts concepts of ourselves as individuals and of our place in biological universe, concepts of race/ethnicity and gender, ability of DNA-based forensics to identify specific individuals, ownership and commodification of genes, issues of privacy and confidentiality, legal and ethical issues, discrimination, issues of predictive genetic testing. Discussion of human cloning for reproductive and therapeutic purposes. Exposure to medical genetics cases. Discussion of science and ethics of genome sequencing in clinical setting. Human Genome Project influence on medicine and on our concepts of self and identity. Letter grading.

105A. Ways of Knowing in Life and Human Sciences. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 5 or M71A or M72A. Course 105A is not requisite to 105B. Introduction to study of epistemology to train students to think of different ways of knowing what we know. In life and human sciences, instruments and methods are used to study, measure, and experiment. Exploration of how they are represented in technological, sociocultural, and ethical settings to reconstruct aspects of human history or to trace identity of people. Databases play role in life sciences in administrative, commercial, and legal contexts. Photography is used in sciences and medicine (e.g., X-ray photography), as well as in art and forensics. Letter grading.

105B. Problems of Identity at Biology/Society Interface. (4) Lecture, three hours; discussion, one hour. Enforced requisites: course 101 or Anthropology 7, or Life Sciences 4 and 23L (may be taken concurrently). Course 105A is not requisite to 105B. Exploration of problems of human identity that are inherent biological and social. Topics vary and may include race, obesity and nutrition, autism, deafness or disability, gender, intelligence, or sexuality. Topics contain set of intertwined problems so complex, so difficult to define, and so wrapped up in conceptions of what it is to be human, that it has spawned research from variety of perspectives in biological and human sciences. Students critically engage various
intellectual perspectives—some competing, some complementary—that intersect on one particular topic. Examination of how researchers from social, historical and biological sciences construct topic as intellectual problem, methods they bring to bear on it, and findings. Letter grading.

108. Human Biology, Genetics, and Society. (5) Lecture, three hours; laboratory, two hours. Limited to senior Biology and Society majors. Lectures, readings, and projects that develop an interdisciplinary, participatory culminating project. Group-based research projects in mapping and staging contemporary controversies at intersections of human biology, genetics, and society. Reflections on the meaning of matters. Sense of both scientific concepts and social and political issues, with original research project and presentation required. Letter grading.

120. Genetics and Human History. (4) Lecture, three hours. Enforced requisite: course 101 or Life Sciences 4. Advancements in genomic research have rapidly transformed traditional archaeological and historical investigations of human past. Drawing from recent research, focus on how genomic analysis has shed new light on old debates such as migration of Homo sapiens out of Africa, human interbreeding with Neanderthals, first migration to North America, ethnic expansions throughout Europe, and genetic legacy of early humans and the first migration to North America. Ethnogenetic theory is also considered. Lecture grading.

121. Race, Science, and Citizenship. (4) Seminar, three hours. Development of scientific method and systematic exclusion of those in subordinate social groups from scientific practice, interrogation of binaries that privilege knowledge, and consideration of how norms and values embedded in Western science compare with indigenous or local knowledge systems. How medical research is motivated by competing assumptions of racial hierarchy and equality. Examination of governments’ use of science to classify racially inferior and contaminate foreigners as threats to sociocontoural order. Exploration of how people use knowledge about their embodied experience to demand and accept responsibility for their own health and vitality, either in opposition to or alliance with scientific experts. How contemporary issues in science and citizenship bring to light some central concerns of social and political theory. Letter grading.


M132. Food Security and Food Politics. (5) (Same as English M118F) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3. Introduction to interdisciplinary field of food studies, with focus on how literature, art, science writing, and visual culture address political dimensions of food and agriculture in specific contexts. P/NP or letter grading.

M133. Environmental Sociology. (4) (Same as Environ- ment M133 and Sociology M115.) Lecture, three hours; discussion, one hour. Relationship between society and environment. Analysis in detail of interrelationships between social factors (such as class, race, gender, and sexual orientation) and environmental factors (such as pollution, waste disposal, sustainability, and global warming). P/NP or letter grading.

134. Food and Health in Global Perspective. (4) Lecture, three hours. Study problematizes and adds depth to common assumptions about healthy and unhealthy consumption by examination of relationships between food and health, from critical and holistic perspective, that accounts for interplay of biology and culture within broader historical, societal, and global contexts. Topics include what is meant by health, especially in terms of diet; relationship between food practices and evolutionary biology, as well as cultural, historical, and social contexts; explanations of how foods and their nutritional properties interact with human bodies and the factors that determine when we eat. Lecture grading.

M140. Hormones and Behavior in Humans and Other Animals. (4) (Same as Anthropology M128R and Physiological Science M140.) Lecture, three hours; discussion. Discussion of function of hor- mones, and physiology and genetics involved in hormonal processes and function. Interactions among hormonal levels, environmental stimuli, and behavior. Sexual behavior, pregnancy, and lactation, parental behavior, development and emigration, stress, social behavior, dominance relationships, aggression, chemoreception, and reproductive suppression. Critical of primary literature and discussion of behavioral endocrinology about humans and other species. Consideration of spectrum of noninvasive to highly invasive endocrine sampling methods, and which types of questions can be answered in laboratory and field, as well as ethics of hormonal studies and their impli- cations for humans and other animals. Letter grading.

M144. Stress and Society: Biology and Inequality. (4) (Same as Sociology M144.) Lecture, three hours; discussion, one hour. Integrative view of health disparities, one of most pressing problems of society, through investigation of effects of socioeconomic status (SES) on Health. Topics include stress and its implications on stress biology. Topics include introduction to fundamentals of physiology of stress, integration of literature on poverty and SES with studies on physio- logical and cultural dimensions of stress. Exploration of how society, culture, and community are shaped by social experiences. Lecture grading.

160. Politics of Heredity. (4) Seminar, three hours. Exploration of intersection of politics and genetics in liberal democracies and totalitarian regimes. How genetics has been used to consolidate and undermine political authority, and how political authority has been employed to manipulate and restrict genetics. Consideration of several historical episodes such as rise to power in Soviet Union of T.D. Lysenko, peasant agronomist who rejected Mendelism in favor of quasi-Lamarckian approach to genetics; participation of geneticists in creation of racial state in Nazi Germany; and debates over compulsory sterilization of mental defectives in U.S., Canada, and Europe from 1920s to 1940s. Focus on how geneticists work together, sometimes competitively, to generate knowledge. Consideration of some implications and contradic- tions for politics and knowledge production that emerge from study of genetics and biotechnology. Lecture grading.


164. Ethics in Health and Research. (4) Lecture, three hours. How should life-saving organs be allocated in context of scarcity? What happens when doctor disagrees with patient on treatment? Should researchers be allowed to experiment on human beings? Although medicine has always been faced with life-or-death decisions, new challenges arise in light of dramatic advances of biomedicine in 21st century. New possibilities for cures come with new moral issues. Biomedical research is full of promises, yet faces many ethical difficulties. Examination of the authority of decision making and the ethical considerations in articulating point of views of all actors engaged in those decisions at local and international levels—doctors, nurses, patients, families, health policymakers, research and citizens. Focus with reliance on philosophical essays and material from contemporary media. Letter grading.

165. Introduction to Bioethics. (4) Lecture, three hours. Should one be allowed to choose sex of babies or whether they will be tall enough to be next basketball star? Should terminally ill be helped to die? Do human embryos have moral status? Examples of ethical questions that arise in light of dramatic advances of biomedicine in 21st century. How new knowledge and biotechnology give rise to great pos- sibilities for improving care and finding cures, they also create new moral dilemmas and challenge us to redefine what is good life or family. Introduction to field of bioethics, with focus on case studies that rely on contemporary essays in philosophy and material from contemporary media. Letter grading.

175. Current Directions in Social and Historical Study of Science. (4) Seminar, three hours. Reading of large amounts of material to make sense of social and historical issues surrounding genetic research on history of human expansions throughout Europe, and genetic legacy of early humans and the first migration to North America. Ethnogenetic theory is also considered. Lecture grading.
construct series of reading assignments that examine student coordinator, and write final research paper. May be repeated for credit with topic change. Letter grading.

188. Special Courses in Society and Genetics. (4) Seminar, three hours. Departmentally sponsored experimental or temporary courses on selected topics, such as those taught by visiting faculty members. May be repeated for credit with topic change. Letter grading.

190. Research Colloquia in Society and Genetics. (1) Seminar, one hour. Limited to juniors/seniors. Designed to bring together advanced undergraduate students undertaking faculty-supervised tutorial research to discuss their own work or related work in society and genetics. May be repeated once for credit with topic change. P/NP grading.

191. Variable Topics Research Seminars: Perspectives in Society and Genetics. (5) Seminar, three to four hours. Enforced requisites: courses 101 (or Life Sciences 4), M102. Discussion of genetics and society from historical perspective. How science of genetics itself is deeply social. Study of how biologists and anthropologists have conceptualized relations of genes and (social) environment. Reading of accounts of human nature, human flourishing, and dignity that seem to privilege nature as something that can guide ethical thought and action. How these accounts would encourage or discourage people from manipulating their genetic inheritance. Consideration of what is new in new genetics. Current discussions of promise and peril of genetics in relation to society. Culuminating paper required. May be repeated once for credit with topic change. Letter grading.

191R. Capstone Seminar: Human Biology and Society. (4) Seminar, three hours. Enforced requisites: courses 105A, 105B. Students bring their accumulated interdisciplinary knowledge and methodological tools to bear on one contemporary problem at intersection of biology and society. Students peer, major studies fall within different concentrations, share and learn from each others' multiple perspectives while working together on one topic presented in class. May vary and come from major concentrations. Culuminating project is team writing assignment, such as grant proposal, report to Congress on contemporary issue, or business plan for new kind of company or nonprofit firm addressing issues in human biology and society. Letter grading.

191S. Capstone Seminar: Society and Genetics. (5) Seminar, three hours. Enforced requisites: courses 101 (or Life Sciences 4), M102. Discussion of genetics and society from historical perspective. How science of genetics itself is deeply social. Study of how biologists and anthropologists have conceptualized relations of genes and (social) environment. Reading of accounts of human nature, human flourishing, and dignity that seem to privilege nature as something that can guide ethical thought and action. How these accounts would encourage or discourage people from manipulating their genetic inheritance. Consideration of what is new in new genetics. Current discussions of promise and peril of genetics in relation to society. Culuminating paper required. May be repeated once for credit with topic change. Letter grading.

193. Journal Club Seminars: Society and Genetics. (1) Seminar, one hour. Limited to undergraduate students. Discussion of topics related to guest speaker series may be repeated for credit. P/NP grading.

195CE. Community or Corporate Internships in Society and Genetics. (4) Tutorial, to be arranged; fieldwork, eight to 10 hours. Limited to juniors/seniors. Internship in corporate, governmental, or nonprofit setting coordinated through Center for Community Learning. Students complete weekly written assignments, attend bimonthly meetings with graduate student coordinator, and write final research paper. Faculty sponsor and graduate student coordinator construct series of reading assignments that examine issues related to internship site. May be repeated for credit with consent of Center for Community Learning. Individual contract with supervising faculty member required. Letter grading.

196. Research Apprenticeship in Society and Genetics. (2) Tutorial, six hours. Limited to juniors/seniors. Enrolled research opportunities in society and genetics under guidance of faculty mentor. May be repeated for maximum of 4 units. Individual contract required. P/NP or letter grading.

197. Individual Studies in Society and Genetics. (2 to 4) Tutorial, to be arranged. Limited to juniors/seniors. Individual intensive study, with scheduled meet- ings to be arranged between faculty member and student. Assessed readings and tangible evidence of mastery of subject matter (paper or other product) required. May be repeated for credit. Individual contract required. Letter grading.

199. Directed Research in Society and Genetics. (2 to 4) Tutorial, six to 12 hours. Preparation: submission of written proposal outlining study or research to be undertaken due to undergraduate adviser for depart- ment approval. Studies to involve laboratory research, not primarily literature surveys or library research. Proposal to be developed in consultation with instructor. Limited to juniors/seniors. Department ma- jors may enroll with sponsorship from department faculty members or preapproved outside faculty members. Other juniors/seniors may enroll only with department faculty sponsors. Supervised individual research under guidance of faculty mentor. At end of term, culminating paper describing progress of study and signed by student and instructor must be pre- sented to department. May be repeated for credit. Individual contract required. Letter grading.

Graduate Course

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

SOCIOLGY

College of Letters and Science

264 Haines Hall
Box 95151
Los Angeles, CA 90095-1551
310-825-1313
frdesk@soc.ucla.edu
http://www.sociology.ucla.edu

Darnell M. Hunt, PhD, Chair

Professors

Walter R. Allen, PhD
Francis R. Anderson, BA
César J. Ayala, PhD
Jennie E. Brand, PhD
Rogers Brubaker, PhD (UCLA Foundation Professor)
Duane W. Champagne, PhD
Steven E. Clayman, PhD
Rebecca J. Emigh, PhD
Laura E. Gómez, JD, PhD
John C. Heritage, PhD
Rubén Hernández-Léon, PhD
Patrick C. Heuveline, PhD
Darnell M. Hunt, PhD
Gail Kligman, PhD
Hannah L. Landecker, PhD
Ching-Kwan Lee, PhD
Vilma Ortiz, PhD
Anne R. Pebley, PhD
Jeffrey Prager, PhD
Abigail C. Saguy, PhD
Judith A. Seltzer, PhD
Tanya J. Stivers, PhD

Katherine Stone, JD (Arjay and Frances Fearing Miller Professor of Law)
Megan M. Sweeney, PhD
Christopher C. Tilly, PhD
Stefan Timmermans, PhD
Roger Waldinger, PhD
Min Zhou, PhD (Walter and Shirley Wang Professor of U.S./China Relations and Communications)
Lynne G. Zucker, PhD

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Kenneth D. Bailey, PhD
Richard A. Berk, PhD
Phillip Bonacich, PhD
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David J. Halle, PhD
M. Nicolette Hart, PhD
John E. Horton, PhD
Jack Katz, PhD
Barbara B. Lai, PhD
Ivan H. Light, PhD
David E. Lopez, PhD
Michael Mann, PhD
Robert D. Mare, PhD
William M. Mason, PhD
Ruth M. Milkman, PhD
Jerome Rabow, PhD
William G. Roy, PhD
Emmanuel A. Schlegoff, PhD
Melvin Seeman, PhD
Ivan Szelenyi, PhD
Warren D. Tenhouten, PhD
Donald J. Treiman, PhD
Maurice Zeitlin, PhD

Associate Professors

Marcus A. Hunter, PhD
Mignon R. Moore, PhD
Aaron L. Panofsky, PhD
Meredith Philips, PhD
Gabriel Rossman, PhD
Edward T. Walker, PhD

Assistant Professors

Stefan Bargheer, PhD
Karida L. Brown, PhD
Lauren M. Duquette-Rury, PhD
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S. Michael Gattis, PhD
Jeffrey J. Guin, PhD
Kevan K. Harris, PhD
Ka-Yuet Liu, PhD
Aliza R. Luft, PhD

Scope and Objectives

Sociology is the study of the organization, dy- namics, and consequences of social life. The scope of the discipline is as broad and diverse as social life itself. Sociologists study social in- teraction and relationships, organizations and institutions, communities and whole societies. The methods of sociological investigation are also varied: sociologists immerse themselves in the daily life of groups, interview group par- ticipants, examine recorded interaction, inter- pret historical documents, analyze census data, and conduct large surveys. The methods and concepts of sociology yield powerful insights into the social processes shaping lives, prob- lems, and possibilities in contemporary soci- ety. The capacity to identify and understand these processes—a capacity that C.W. Mills called the “sociological imagination”—is valu- able preparation for personal and professional participation in a changing and complex world.
In addition to contributing to a liberal arts education, the Sociology major prepares individuals for a broad range of career options and graduate and professional studies. The analytical perspectives and skills gained in the major are a foundation for careers in law, social welfare, urban planning, business, education, and public health. The major also supplies a foundation for students intending to pursue graduate work in sociology and related fields. Employment opportunities available to the graduate with a Bachelor of Arts degree in Sociology also include work in community service organizations and health agencies, government service, and human resources.

The Department of Sociology faculty includes internationally renowned scholars who address topics ranging in scope from the organization of face-to-face interaction to the consequences of globalization. The department boasts outstanding teachers—five of whom have won Distinguished Teaching Awards—and excellently trained teaching assistants, many of whom have also won awards. The select honors program has a record for training students in the fundamentals of research and generating honors theses of substantial accomplishment.

The PhD in Sociology usually leads to a career in research and/or teaching. Although most sociologists are employed by universities, there are increasing career opportunities in government and other nonuniversity research centers.

Undergraduate Study

Sociology BA

Sociology Premajor

Only students with fewer than 90 units completed (excluding Advanced Placement units/credit) may declare the Sociology premajor once they complete either Sociology 1 or 20 with a grade of C or better.

Preparation for the Major

Required: Sociology 1, 20, and one course from Political Science 6, Statistics 10, or 13.

A minimum grade of C is required in each preparation for the major course. Students with a grade-point average less than 2.0 in the preparation coursework are not eligible for admission to the major. Students who repeat any preparation course more than once are automatically denied admission to the major.

Freshman Students

Students must petition to declare the Sociology major. If Sociology 101 or 102 has already been completed, a grade of C or better is required. Grades in any other completed sociology courses for the major must be C– or better.

Transfer Students

Transfer applicants to the Sociology premajor with 90 or more units must complete the following introductory courses prior to admission to UCLA: one introduction to sociology course and one statistics course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Eleven upper-division courses, including (1) two theory courses—Sociology 101, 102; (2) one methods course from Sociology 106A, 106B, 110A, 110B, 112, 113, M124A, 191H, or Statistics 112; (3) one course from each of the following core areas: (a) interactions—Sociology 111, M124A, CM125, 126, 130, 132, 133, 134, or 152, (b) institutions and social processes—course 116, 121, 143, 151, 158, 172, 173, M174, M175, M176, or 181B, (c) power and inequality—course M115, 122, 147A, M155, 156, 157, M161, M162, M164, M165, 181A, 182, 183, 185, or 186; and (4) any five upper-division sociology elective courses.

Students should complete course 101 and the core courses before taking other upper-division courses. Each course for the major must be taken for a letter grade. To graduate, students must have at least a 2.0 grade-point average in their upper-division major courses, with grades of C or better in Sociology 101 and 102.

Only 8 units of Sociology 199 are allowed. The two theory courses, three core area courses, one methods course, and one sociology elective (seven courses total) must be taken while in residence in the College of Letters and Science at UCLA.

Honors Program

The honors program in sociology provides opportunity for outstanding students to undertake an independent year-long research project under the guidance of a faculty member. Students who successfully complete the honors program graduate with departmental honors.

As preparation for the honors program, students must complete all preparation for the major courses. After acceptance into the honors program, students are required to take courses 191H, 198A, 198B, and 198C (honors thesis seminars) which may be applied as electives toward the major requirements.

Students must have a 3.5 overall grade-point average, have completed the sociology preparation requirements and, in most cases, have completed the required theory course. Applications are available from the undergraduate adviser’s office, 254E Haines Hall.

Computing Specialization

Majors in Sociology may select a specialization in Computing by (1) satisfying all the requirements for a bachelor’s degree in the major, (2) completing Program in Computing 10A, 10B, 10C, and (3) completing Sociology 111, 113. Each course must be taken for a letter grade. Students graduate with a bachelor’s degree in sociology and a specialization in Computing.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Sociology offers Master of Arts (MA), Candidate in Philosophy (CPhil), and Doctor of Philosophy (PhD) degrees in Sociology.

Sociology

Lower-Division Courses

1. Introductory Sociology. (5) Lecture, four hours; discussion, one hour. Survey of characteristics of social life, processes of social interaction, and tools of sociological investigation. P/NP or letter grading.

M5. Social Organization of Black Communities. (5) (Same as African American Studies M5.) Lecture, four hours; discussion, one hour; field trips. Analysis and interpretation of social organization of black communities, competing theories and research findings, defining characteristics and contemporary issues. Letter grading.

10. Social Thought and Origins of Sociology. (5) Lecture, three hours; discussion, two hours. Introduction to history of social thought, with special emphasis on theoretical precursors to development of discipline of sociology. Exposure and analysis of selected social theorists and concepts, especially from the 17th to 19th centuries. Letter grading.

20. Introduction to Sociological Research Methods. (5) Lecture, three hours; discussion, one hour. Introduction to methods used in contemporary sociological research, with focus on issues of research design, data collection, and analysis of data. Fieldwork may be required. Letter grading.

40. American Racism: Psychosocial Analysis. (5) Lecture, four hours; discussion, one hour. Examination of long-standing history of American racism, beginning with institution of slavery, Jim Crow legislation, separate but equal doctrine, Brown versus Board of Education, Civil Rights legislation of 1960s, and Obama presidency. Focus on persistence over time of racist beliefs and mechanisms through which racism becomes passed on from one generation to next. Racism toward African Americans and harms it has inflicted on African American community, as well as on nation as whole. Examination of psychology and sociology of racism through video clips, social scientific texts, essays by prominent American humanists, and American literature that deals centrally with racism. P/NP or letter grading.

51. Sociology of Migration. (3) Lecture, three hours; discussion, one hour. Introduction to fundamental theories, themes, and research methods used in sociological research through comparative study of international migration. Examination of theoretical debates and empirical analysis of causes and consequences of transnational migration in countries of origin and destination, with focus on issues of race, ethnicity, social networks, development, citizenship, and state in comparative context. Letter grading. M72A-M72B-M72CW. Sex from Biology to Gendered Society. (6-6-6) (Same as Communication M72A-M72B-M72CW. Clusters M72A-M72B-M72CW, and Society and Genetics M72A-M72B-M72CW) Course M72A is enforced requisite to M72B, which is enforced requisite to M72CW. Limited to first-year freshmen. Letter grading. M72A-M72B. Lecture, three hours; discussion, two hours. Examination of many ways in which sex and sexual identity shape and are shaped by biological and social forces, approached from complementary perspectives of anthropology, biology, medicine, and sociology. Specific topics include biological origins of sex differences, intersex, gender identity, gender inequality, homosexuality, sex differences, sex/gender and law, and politics of sex research. M72OW. Special Topics. Seminar, three hours. Enforced requisite: course M72B. Topics
may include politics of reproduction, sexuality, sexual identity, social construction of gender, and reproductive technologies. Satisfies Writing II requirement.

97. Variable Topics Research Seminars: Sociology. (4) Seminar, three hours; discussion, one hour. Comparative survey of basic concepts and theories in sociology from 1850 to 1920. P/NP or letter grading.


106A. Field Research Methods I. (6) Lecture, two hours; discussion, two hours; fieldwork, eight to 10 hours. Research practicum in which students write field notes on their experiences in and observations of intensive internship field placement. Readings focus on fieldwork roles and relations, observing and describing, relationships, interview techniques, ethical issues, and preliminary data analysis. Fieldwork and extensive field notes required. Letter grading.

106B. Field Research Methods II. (6) Lecture, two hours; discussion, two hours; fieldwork, 10 hours. Required for course 106A. Collection and analysis of both field notes and unstructured interview data from student field placement. Use of techniques of qualitative data analysis, including qualitative coding, analytic memoing, and grounded theory methods, to analyze these materials and to write ethnographic paper. Letter grading.

110. Sociohistorical Methods. (4) Lecture, three hours; laboratory, one hour. Analysis of how social networks create structure and how social actors utilize them and their unexpected effects. Topics include job search, firm efficiency, and social movements. Visualization programs, computer simulations, and research projects. P/NP or letter grading.

112. Introduction to Mathematical Sociology. (4) Lecture, three hours; laboratory, one hour. Requisite: Mathematics 2, 3A (course whose content includes introductory set theory, matrix algebra, and differential and integral calculus), Statistics 10. Mathematical treatment of several sociological phenomena, such as occupational mobility, population growth, organizational structure, and friendship patterns, each covered in some detail, including initial development and subsequent evaluation and modification (emphasizing both deductive and computational aspects of mathematical logic). Letter grading.

113. Statistical and Computer Methods for Social Research. (4) Lecture, three hours; laboratory, one hour. Requisite: Statistics 10. Continuation of Statistics 10, covering more advanced statistical techniques such as multiple regression, analysis of variance, or factor analysis. Content varies. Students learn how to use computer and write papers analyzing prepared data sets. P/NP or letter grading.

115. Environmental Sociology. (4) (Same as Environmental Science and Policy M133.) Lecture, three hours; discussion, one hour. Relationship between society and environment. Analysis in detail of interrelations between social factors (such as class, race, gender, and religion) and environmental factors (such as pollution, waste disposal, sustainability, and global warming). P/NP or letter grading.


117. Family Demography. (4) Lecture, three hours; discussion, one hour. Examination of demographic behaviors, such as marriage, divorce, and childbearing, in the context of the family organization. Sociological approach to understanding causes and consequences of trends and differentials in family formation and dissolution. P/NP or letter grading.

118. Simulating Society: Exploring Artificial Communities. (5) (Same as Honors Collegium M148.) Seminar, three hours; computer laboratory, one hour. Examining social behavior through individual computer simulations of behavior in artificial communities. P/NP or letter grading.

119. Primate Societies. (4) Lecture, three hours; discussion, one hour. Limited to juniors/seniors. Selected topics on diverse behaviors and cultural forms of primate cousins, with special focus on baboons, chimpanzees, and gorillas. Examination of primate sociocoeology, sexual competition, demography and kinship, political control and interactions within and between groups. Implications for our lives as human primates. P/NP or letter grading.

120. Disability Rights Law. (4) (Same as Disability Studies M149.) Lecture, four hours. Examination of disability relations and policies affecting people of all ages across wide spectrum of settings in both public and private sectors—from preschool to higher education, from military to workplace, and from intensely urban environments to online and virtual worlds. Topics range from persistent and recurring disputes to novel controversies fueled by new technologies and changing social patterns.

121. Sociology of Religion. (4) Lecture, three hours; discussion, one hour. Examination of classic and contemporary work in social scientific study of religion. Analysis of definition of religion, role of religion in modern society, and religious varieties like Islam in contemporary U.S. politics. Focus on complicated question of what it means to say someone or something is religious: does that mean they are moral, believe in God, or are part of community of believers? Students gain better sense of how to think and talk about religion. P/NP or letter grading.

122. Sociology of Violence. (4) Lecture, three hours; discussion, one hour. Exploration of macro-, meso-, and micro-levels, why states organize violence, why civilizations participate in violence, and physical, structural, and symbolic violence. Discussion of how various social categories such as race, ethnicity, gender, and sex are implicated in violence and examination of cases of interstate war, genocide, civil war, terrorism, and pogroms from around world.

124A-M124B. Conversational Structures I, II. (4-4) (Same as Communication M144A-M144B.) Lecture, three hours; discussion, one hour. P/NP or letter grading. M124A. Introduction to some structures that are employed in organization of conversational interaction, such as turn-taking organization, organization of repair, and some basic sequence structures with limited expansions.

125. Talk and Social Institutions. (4) (Same as Communication M125.) Lecture, four hours; discussion, one hour. Designed for juniors/seniors. Practices of communication and social interaction in number of various settings; social control and deviance; conformity and deviation; reference groups; and interaction process. P/NP or letter grading.


128. Sociology of Emotions. (4) Lecture, three hours; discussion, one hour. Conceptualizations of time seen from scientific, philosophical, historical, and sociological perspectives; “cyclical” and “linear” time in primitive, ancient, and medieval societies; ritual, the sacred, and experience of the eternal; structuring of urban, modern, and postmodern societies by clock, calendar, and schedule; future value orientation and notion of progress; time, labor, and social dominance. P/NP or letter grading.

129. Sociology of Time. (4) Lecture, three hours; discussion, one hour. Conceptualizations of time seen from scientific, philosophical, historical, and sociological perspectives; “cyclical” and “linear” time in primitive, ancient, and medieval societies; ritual, the sacred, and experience of the eternal; structuring of urban, modern, and postmodern societies by clock, calendar, and schedule; future value orientation and notion of progress; time, labor, and social dominance. P/NP or letter grading.

130. Self and Society. (4) Lecture, three hours; discussion, one hour. Examination of social processes shaping experience, definition, and enactment of self and world. Sociology, literature, and psychology. Requisite: course 101. Concurrently scheduled with course 141A. Designed for juniors/seniors. Characteristics of crowds, mobs, publics, social movements, and revolutions; their relation to social unrest and their role in developing and changing social organization. P/NP or letter grading.


132. Social Psychology: Sociological Approaches. (4) Lecture, three hours; discussion, one hour. Survey of contribution of sociologists to theory and research in social psychology, including theories of social control; conformity and deviation; reference groups; and interaction process. P/NP or letter grading.

133. Collective Behavior. (4) Lecture, three hours; discussion, one hour. Requisite: course 101. Designed for juniors/seniors. Characteristics of crowds, mobs, publics, social movements, and revolutions; their relation to social unrest and their role in developing and changing social organization. P/NP or letter grading.

136. Death, Suicide, and Trauma. (4) (Same as Psychology M163.) Lecture, three hours; discussion, one hour. Sociological analysis of incidence of violent death. Suicide is eighth leading cause of death in U.S. and third leading cause for young people aged 15 to 24. Both kinds of violent deaths are often dismissed as extreme psychopathology, reflecting individual mental health issues. Sociologists argue that suicide and homicide are social facts. Suicide and homicide do not occur randomly in society but are stratified according to social factors such as age, gender, race, sexual orientation, and class. Description and analysis of this sociological argument and evaluation of explanatory potential of different theories to make sense of violent death, paying particular attention to forensic and medical systems to solve and solve homicides. Review of historic and contemporary studies to examine how research and conceptualizations of suicide and homicide have changed, as well as social responses to these phenomena. P/NP or letter grading.

141A. Migration and Labor in Mexico-U.S. Context. (5) Seminar, 20 hours. Mexico-U.S. migration is largest and oldest continuous international population flow of contemporary world. In recent decades, prompted by swift economic transformations, rural and urban Mexicans from every corner of Mexico have joined this migratory flow, settling well beyond southern border region to areas in U.S. interior. Migration is binding U.S. and Mexico stronger than ever, putting this complex and multiply-eroded phenomena at top of bilateral agenda. Examina-
tion of sociological dynamics of international migration and labor as they apply to Mexico-U.S. context, including demographic, political, and economic dynamics of migration, economic and social infrastructures that support cross-border mobility, and connections of migration to transnational, national, regional, and local labor markets. Comparative insights to contrast this flow with other contemporary population streams. Offered in summer only. Letter grading.

M141B. Lab in Mexican-U.S. Context: Research Seminar. (5) Seminar, 10 hours; fieldwork, 10 hours. Development of qualitative micro-study and research paper on migration and labor in Mexico-U.S. context. Students will develop a topic of interest to be selected so students become familiar with commonly employed qualitative methods of research. Designed to help students understand basics of methodological reasoning, how to formulate research questions, and how to frame and investigate one particular issue related to migration and labor. How to make ethical decisions about conducting research. Development of student abilities as researchers by conducting secondary and primary research culminating in final research paper to be presented to faculty members and peers. Offered in summer only. Letter grading.

M142. Healthcare in Transnational Communities. (4) (Same as Anthropology 142.) Lecture, three hours; discussion, one hour. Analysis of major sociological and sociopolitical models of madness. Study of sociological processes shaping definition, experience, and response to aging in contemporary society. Topics include race, class, and gender in aging and the roles of social and cultural worlds of aged; caregiving relations and institutions; professions concerned with aged and aging. Letter grading.

M143. Comparative Immigration. (4) Lecture, three hours; discussion, one hour. Survey of immigration of Europeans, Asians, and Hispanics to the U.S. since the mid-19th century. Overview of immigration experience on ethno-racial groups that migrated voluntarily to this country, with emphasis on immediate postimmigration settlement. P/NP or letter grading.

M144. Strain and Sociopathy: Biology and Inequality. (4) (Same as Society and Genetics M144.) Lecture, three hours; discussion, one hour. Integrative view of health disparities, one of most pressing problems of society, through investigation of effects of socioeconomic status (SES) on health and disease, using specific lens of stress biology. Topics include introduction to fundamentals of physiology of stress, integration of literature on poverty and SES with studies on physiological consequences of poverty, and introduction of concepts of life course by following stress biology through childhood development and into adulthood. Letter grading.

M145. Sociology of Deviant Behavior. (4) Lecture, three hours; discussion, one hour. Examination of leading sociological approaches to study of deviation and general survey of major types of deviation in American society. P/NP or letter grading.

M147A. Sociology of Crime. (4) Lecture, three hours; discussion, one hour. Sociological theories of social origins, organization, and meanings of crime and criminal behavior. P/NP or letter grading.


M149. Youth, Trouble, and Juvenile Justice. (4) Lecture, three hours; discussion, one hour. Examination of processes through which youth become involved in juvenile justice system. Analysis of this system as people-processing and people-changing institution as context for considering critical issues in juvenile justice. P/NP or letter grading.

M150. Sociology of Aging. (4) (Same as Gerontology M150.) Lecture, three hours; discussion, one hour. Study of sociological processes shaping definition, experience, and response to aging in contemporary society. Topics include race, class, and gender in aging and the roles of social and cultural worlds of aged; caregiving relations and institutions; professions concerned with aged and aging. Letter grading.

M151. Comparative Immigration. (4) Lecture, three hours; discussion, one hour. Survey of immigration of Europeans, Asians, and Hispanics to the U.S. since the mid-19th century. Overview of immigration experience on ethno-racial groups that migrated voluntarily to this country, with emphasis on immediate postimmigration settlement. P/NP or letter grading.

M152. Comparative Acculturation and Assimilation. (4) Lecture, three hours; discussion, one hour. Requisite: course 151. Comparison of acculturation and assimilation of Europeans, Africans, Mexicans, and Asians in the U.S., with emphasis on long-term cultural consequences of immigration. P/NP or letter grading.

M153. Chinese Immigration. (4) (Same as Asian American Studies M130C.) Lecture, three hours; discussion, one hour. Survey of sociological studies of Chinese immigration, with focus on international context, organization, and institutions, change, demography, and its interactions with social environment. P/NP or letter grading.

M154. Race and Ethnicity: International Perspectives. (4) Lecture, discussion, one hour. Not open to freshmen. Role of race and ethnicity in political, economic, and social lives of nations other than the U.S. P/NP or letter grading.

M155. Latinos in U.S. (4) (Same as Chicana and Chicano Studies M155A.) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Exploration of history and social conditions of Latinos in Los Angeles as well as nationally, with particular emphasis on their location in U.S. social structure and comparisons with other minority groups. Topics include migration, family, education, and work issues. P/NP or letter grading.

M156. Race and Ethnicity in American Life. (4) Lecture, three hours; discussion, one hour. Role of race and ethnicity in the U.S., including interplay between racial and ethnic structures and meanings. Special attention to comparison of African American and European American experiences. Historical evolution of Asian American and Latino communities and the nation generally, wrought by renewal of mass migration in second half of the 20th century. P/NP or letter grading.

M157. Social Stratification. (4) Lecture, three hours; discussion, one hour. Analysis of American social structure in terms of evaluational differentiation. Topics include criteria for differentiation, bases for evaluation, types of stratification, composition of strata and status systems, mobility, consequences of stratification, and problems of methodology. P/NP or letter grading.

M158. Urban Sociology. (4) Lecture, three hours; discussion, one hour. Description and analysis of urbanization and urbanism in the U.S. and world. P/NP or letter grading.


M162. Sociology of Gender. (5) (Same as Gender Studies M162.) Lecture, three hours; discussion, one hour. Enforced requisite: course 1 or Gender Studies 10. Examination of processes by which gender is socially constructed. Topics include distinction between biological and social origins, gender socialization trends and consequences of gender inequality, and recent changes in gender relations in modern industrial societies. P/NP or letter grading.

M163. Gender and Work. (4) (Same as Gender Studies M163.) Lecture, three hours. Requisite: course 1 or Gender Studies 10. Exploration of relation of gender to work, concentrating on the U.S. experience but also including some comparative material. Particular emphasis on analysis of causes and consequences of job segregation by gender and of wage inequality. P/NP or letter grading.

M164. Politics of Reproduction. (4) (Same as Gender Studies M164.) Lecture, three hours; discussion, one hour. Title refers to intersection between politics and life cycle. Topics include social construction of gender and population, reproductive issues, possibilities for mothers, more effective birth control, surrogacy, and new reproductive technologies. Letter grading.

M165. Sociology of Race and Labor. (4) (Same as African American Studies M165 and Labor and Workplace Studies M165.) Lecture, three hours; discussion, one hour. Limited to juniors/seniors. Exploration of relationship between race/ethnicity, employment, and U.S. labor movement. Analysis of underlying racial divisions in workforce and how they evolved historically. Consideration of circumstances under which workers and unions have excluded people of color from jobs and unions, as well as circumstances under which workers and unions have tried to integrate people of color into unions in efforts to improve their wages and working conditions. Impact of globalization on these dynamics. P/NP or letter grading.

M166. Organizations and Society. (4) Lecture, discussion; one hour, one hour. Historical analysis of organizations and their social environment. Introduction to basic theories, concepts, methods, and research on behavior of organizations in society. P/NP or letter grading.

M169. Law and Society. (4) Lecture, three hours; discussion, one hour. Specific topics may include law in preindustrial and industrialized societies, legalization of primary social relations, implications of different experiences of legal processes, lay perceptions of justice, social movements toward equal justice, roles of lawyers and judges, social impact of court decisions. P/NP or letter grading.

M170. Medical Sociology. (4) Lecture, three hours; discussion, one hour. Requisite: course 1. Provides majors in Sociology and other social sciences, as well as students preparing for health sciences careers, with understanding of health-seeking behavior and interpersonal and organizational relations that are involved in receipt and delivery of health services. P/NP or letter grading.

M171. Occupations and Professions. (4) Lecture, three hours; discussion, one hour. Description and analysis of representative occupations and professions, with emphasis on contemporary U.S. P/NP or letter grading.

M172. Entrepreneurship. (4) Lecture, three hours; discussion, one hour. Description and analysis of entrepreneurship, with special reference to historical origins, ideology, international comparisons, women and ethnic minority participation, legal and illegal forms, public and private auspices. P/NP or letter grading.

M173. Economy and Society. (4) Lecture, three hours; discussion, one hour. Sociology of economic life, with emphasis on principal economic institutions of the U.S. P/NP or letter grading.

M174. Sociology of Family. (4) (Same as Gender Studies M174.) Lecture, three hours; discussion, one hour. Theory and research dealing with modern family, its structure, and functions, including historical changes in family patterns, effect of those changes, influence of contemporary society on family. P/NP or letter grading.

M175. Sociology of Education. (5) (Same as Education M175.) Lecture, four hours; discussion, one hour. Study of how U.S. educational system both promotes socioeconomic opportunities and maintains socioeconomic inequalities: historical and theoretical perspectives; role of education in U.S. society; trends in educational attainment; ways in which family background, class, race, and gender affect educational achievement and attainment; stratification between
and within schools: effects of education on socio-economic attainment, family, health, attitudes, and social participation; educational policies to improve school quality and address socioeconomic inequalities. Letter grading.

M117A. Sociology of Mass Communication. (4) (Same as Communication M117A) Lecture, four hours; discussion, one hour (when scheduled). Studies in relationship between mass communication and social organization. Topics include history and organization of mass media, social forces that shape production of mass media news and entertainment, selected studies in media content, and effects of media on society. P/NP or letter grading.

M178. Latin American Studies M178. Lecture, three hours; discussion, one hour. Limited to juniors/seniors. Historical sociology of Caribbean, with emphasis on colonialism and decolonization, development and underdevelopment, race-making institutions and evolution of race relations, nationalism and migration. P/NP or letter grading.

180A-180Z. Special Topics in Sociology. (4 each) Lecture, three hours; discussion, one hour. Limited to juniors/seniors. Study of selected topics of sociological interest. Consult Schedule of Classes for topics and instructors. May be repeated for credit and may be applied as elective units toward Sociology major. P/NP or letter grading.

181A-181B. Sociology of Contemporary China. (4-4) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Courses may be taken independently for credit. P/NP or letter grading. 181A. Exploration of 20th-century changes in China, including end of dynasties, Republican era, Communist Revolution, and market reform. Topics include trans- formation in Chinese social structure and institutions and everyday practices. Survey of changes and analysis of forces shaping contemporary China and global impact and current implications. 181B. Survey of changes in Chinese society from beginning of 20th century to present. Topics include social mobility and inequality, family and household, and population. Emphasis on changes post-Reform Era and in present. Focus on interaction of economic and political change plus family organization. Contrasts and similarities between China and West, China’s place in social sciences, and challenges due to social organization that originated from studying Western societies.

182. Political Sociology. (4) Lecture, three hours; discussion, one hour. Contributions of sociology to study of politics, including analysis of political aspects of society, the family, the state, and social inequality, and social bases of power. P/NP or letter grading.


185. American Society. (4) Lecture, three hours; discussion, one hour. Analysis of major institutions in the U.S., both modern and historical, with emphasis on topics such as industrialization, work, state, politics, community, family, religion, and American culture. Theories of social change, conflict, and order applied to case of the U.S. P/NP or letter grading.

186. Latin American Societies. (4) Lecture, three hours; discussion, one hour. Social structure and conflict in Latin America, with special attention to racial and class issues and their influence on political development. Country and specific focus varies each term. P/NP or letter grading.

188A. Careers in Sociology. (2) Lecture, two hours. Limited to juniors/seniors. Examination of possible career choices for sociology majors, including such fields as business, nonprofit sector, government, healthcare, entertainment, and other areas. Development of career-relevant materials and skills. Letter grading.

191A. Undergraduate Seminar: Self and Identity. (5) Seminar, three hours. Limited to junior/senior Sociology majors. Examination of cultural, historical, and interpersonal factors that shape self-concept and experience of self. Reading, discussion, and development of culminating project. Letter grading.


M191DC. CAPP Washington, DC, Research Seminars. (4) (Same as Communication M191DC, History M191DC, and Political Science M191DC). Seminar, three hours; laboratory, 24 hours. Limited to CAPP Program students. Seminars for undergraduate students in Center for American Politics and Public Policy’s program in Washington, DC. Focus on development of culminating project. Letter grading.

191E. Undergraduate Seminar: Population Growth Models. (5) Seminar, three hours. Limited to juniors/seniors. Great extension of social relations across globe has occurred over last 50 years. What are causes and mechanisms of this process, how far has it transformed human societies, and how far will it go in future? Economic, cultural, political, and military aspects of globalization. Focus on extent to which global expansion of capitalism, nation-state system, and American imperialism reinforce or undercut each other, producing new lines of division and conflict across the globe. Reading, discussion, and development of culminating project. Letter grading.

191F. Undergraduate Seminar: Sociology of Globalization. (5) Seminar, three hours. Limited to juniors/seniors. Great extension of social relations across globe has occurred over last 50 years. What are causes and mechanisms of this process, how far has it transformed human societies, and how far will it go in future? Economic, cultural, political, and military aspects of globalization. Focus on extent to which global expansion of capitalism, nation-state system, and American imperialism reinforce or undercut each other, producing new lines of division and conflict across the globe. Reading, discussion, and development of culminating project. Letter grading.

191H. Honors Seminars: Sociology. (4) Seminar, three hours. In-depth introduction to process of producing scholarly sociological research for students who intend to write undergraduate thesis for departmental honors. Letter grading.

191I. Undergraduate Seminar: Health and Inequality. (5) Seminar, three hours. Limited to juniors/seniors. During past century, social inequalities in health and survival were widening in the U.S. as in other developed societies. Broad overview of these trends and their causes. Reading, discussion, and development of culminating project. Letter grading.

191J. Undergraduate Seminar: Mexican Society. (5) Seminar, three hours. Selected topics on contemporary Mexican society and vital transformations it has undergone in recent years. Reading, discussion, and development of culminating project. Letter grading.

191K. Undergraduate Seminar: Cigarettes and Western Civilization—Sociological History of Smoking. (5) Seminar, three hours. Limited to juniors/seniors. Use of history of tobacco and cigarette smoking to explore important themes in sociology, history, and culture. History of tobacco from its roots in Native America through its exportation to the West, European colonization in New World, its cultural incorporation in Western society, and its role in rise of industrial way of life and health consequences, and its demise. Letter grading.


191M. Undergraduate Seminar: Social Ecology. (5) Seminar, three hours. Limited to juniors/seniors. Fundamental questions of sociology and sustainability, also known as human ecology. Study of adaptation of population to its environment. Topics include density, maintaining personal space, space and territoriality, and effects of alienation and isolation of individuals. Readings, discussion, and development of culminating project. Letter grading.

C191N. Undergraduate Seminar: Urban and Suburban Sociology. (5) Seminar, three hours. Limited to juniors/seniors. History and present condition of cities and suburbs in America, with stress on global cities such as New York and Los Angeles, and comparisons to London and Shanghai. Process of suburbanization began in early 19th century and continues. Analysis of city politics, house and architectural styles, crime, urban terror, public housing and ghettos, segregation and integration of neighborhoods, question of gentrification, urban culture (especially art, museums, and movie and music industries), and environmentalism. Concur- rently scheduled with course C297. Letter grading.

191NY. Undergraduate Seminar: Urban and Suburban Sociology in New York City. (5) Seminar, eight hours. Limited to students in summer UCLA Travel Study Program. Cutting-edge urban issues in country’s largest city, including New York’s attempt to return for role of 9.2 million World Trade Center. Robert Moses (New York’s master builder), urban economic development, green New York, transportation systems, urban politics, house and architectural styles, including New York’s famous skyscrapers, historic preservation, crime and police depart- ments, ghetto, education, urban poor, public housing, and search for affordable housing. Offered in summer only. Letter grading.


191P. Undergraduate Seminar: Politics of Reproduction. (5) Seminar, three hours. Limited to juniors/seniors. History and present condition of women’s issues is global policy issue. Government efforts to influence reproduction are important feature of modern state: political intervention into private life, intimacy, and sexu- ality. Exploration of politics of reproduction—intersection between politics and life cycle or between public sphere and private lives—and coverage of broad range of issues addressing prevention and promotion of reproduction. Reading, discussion, and development of culminating project. Letter grading.


191R. Undergraduate Seminar: Cultural Sociology. (5) Seminar, three hours. Limited to juniors/seniors. Exploration of primary and secondary contacts of social and contemporary developments in study of social worlds

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dedicated to creating and handling cultural institutions such as literature, journalism, film/television, art, architecture, music, dance, and museums. Discussion of such issues as contemporary validity of distinction between high and popular/low culture, relationship of original culture, how culture expresses and reinforces social inequality, organizational context of culture, and how people express and decipher meaning in cultural objects. Reading, research, and development of culminating project. Letter grading.

191S. Undergraduate Seminar: Sociology of Gender and Sexuality. (5) Seminar, three hours. Limited to juniors/seniors. Study of relationship between society’s military and its social organization, with particular attention to shock-based civic militarism characteristic of the West. Topics include honor, discipline, bureaucracy, conscription, logistics, total war, guerrilla war, terrorism, bureaucracy, and military. Reading, discussion, and development of culminating project. Letter grading.

191T. Tutorial, three hours. Limited to juniors/seniors. Tutorial topics in sociological interest. Reading, discussion, and development of culminating project. Consult Schedule of Classes for topics and instructors. May be repeated for credit and may be counted as elective units toward Sociology major. Letter grading.

194. Research Group Seminars: Sociology. (2) Seminar, two hours. Designed for undergraduate students who are part of research group. Discussion of research methods and current literature in field. May be repeated for credit. P/NP grading.

M194DC. CAPP Program Washington, DC, Research Seminars. (4) (Same as History M194DC and Political Science M194DC) Seminar, three hours. Limited to CAPP Quarter in Washington students and other students enrolled in UC Washington Center programs. Seminars for undergraduate students in Center for History and Social Science, and in CAPP Program in Washington, DC. Focus on development and execution of original empirical research based on experiences from Washington, DC-based field placements. Study of variety of qualitative methods (observation, interviewing, etc.), with comparison to quantitative analysis. Examination of features of solid and significant research; intensive writing. Letter grading.

195. Community or Corporate Internships in Sociology. (4) Tutorial, three hours. Limited to juniors/seniors. Internship in community agency or business to be supervised jointly by Center for Community Learning and faculty adviser. Students meet on regular basis with instructor and provide weekly reports of their experience. Normally only 4 units of internship are allowed. Individual contract with supervising faculty member required. Letter grading.

195CE. Community and Corporate Internships in Sociology. (4) Tutorial, to be arranged; fieldwork, eight to 10 hours. Limited to juniors/seniors. Internship in corporate, governmental, or nonprofit setting coordinated through Center for Community Learning. Students complete weekly written assignments, attend biweekly meetings with graduate student coordinator, and write final research paper. Faculty supervisor and graduate student coordinator conduct series of reading assignments that examine issues related to internship site. May be repeated for credit with consent of Center for Community Learning. No more than 4 units may be applied toward major; units applied must be taken for letter grade. Individual contract with supervising faculty member required. P/NP or letter grading.

M195DC. CAPP Program Washington, DC, Internships. (4) (Same as History M195DC and Political Science M195DC) Seminar, three hours. Limited to CAPP Program students. Internships in Washington, DC, through Center for American Politics and Public Policy. Students meet on regular basis with instructor and provide periodic reports of their experiences. Individual contract with supervising faculty member required. P/NP grading.

198A-198B-198C. Honors Research in Sociology. (4-4-4) Tutorial, one hour. Requisite: course 191H. Limited to junior/senior Sociology majors. Independent intensive study designed for students who want to do research under guidance of faculty mentor. Sophomore semester arranged between faculty member and student. Culminating paper or project may be required. May be repeated for maximum of 16 units; but only 8 units may be applied toward major. Individual contract required. See under-graduate counselor. P/NP or letter grading.

199. Directed Research in Sociology. (2 to 4) Tutorial, one hour. Requisite: Preparation: 3.0 grade-point average in major. Requisites: course 198 or Statistics 10 or 13. Limited to junior/senior Sociology majors. Independent intensive study designed for students who want to do research under guidance of faculty mentor. Sophomore semester arranged between faculty member and student. Culminating paper or project may be required. May be repeated for maximum of 16 units, but only 8 units may be applied toward major. Individual contract required. See under-graduate counselor. P/NP or letter grading.

199A. Community or Corporate Internships in Sociology. (5) Seminar, three hours. Limited to juniors/seniors. Focus on development and execution of original empirical research based on experiences from Washington, DC-based field placements. Study of variety of qualitative methods (observation, interviewing, etc.), with comparison to quantitative analysis. Examination of features of solid and significant research; intensive writing. Letter grading.

201A-201B-201C. Proseminars: Sociology. (2-2-2) Lecture, two hours; discussion, two hours. Required of first-year graduate sociology students. Introduction to range of theoretical and research interests represented by department faculty members. S/U grading.

202A-202B. Theory and Research in Sociology. (4-4) Lecture, two hours; discussion, two hours. Required of first-year graduate sociology students. Examination of interrelations of theory, method, and substance in exemplary sociological works, with analytical and skills-orientation. In Progress (202A) and S/U or letter (202B) grading.

203. How to Write a Lot. (4) Seminar, three hours. Designed to help graduate students develop regular and productive writing practices. Appropriate for students in their second year who have one full draft of their MA paper written and want to revise and publish it in timely manner. Development of regular writing schedules and protecting them from competing demands. Learning of specific genres of writing for academic journals, books, and op-eds. Editing of students’ own work and that of classmates. S/U or letter grading.

204. Topics in Sociological Theorizing. (4) Seminar, four hours. Examination of selected issues and problems in classical or contemporary sociological theory. S/U or letter grading.

205. Family and Social Change. (4) Lecture, three hours. Examination of role of family and household organization, with major focus on relationships among economic institutions, family structure, and content of family life. Consideration of concepts, theories, and data about kinship. S/U or letter grading.

M206. Understanding Fertility: Theories and Methods. (4) Same as Community Health Sciences M222.) Lecture, three hours. Preparation: one or more formal or semi-formal courses in demography, and some exposure to quantitative methods. Application of demographic theories and methods to describe fertility trends and differentials and social and proximate determinants of fertility, with emphasis on understanding key proximate determinants. For advanced students interested in population, demography of health, and social demography. Letter grading.


210C. Intermediate Statistical Methods III. (4) Lecture, three hours; discussion, one hour. Requisite: course 210B. Survey of advanced statistical methods used in social research, with focus on problems for which classical linear regressions models are inappropriate, including categorical data, structural equations, longitudinal data, incomplete and erroneous data, and complex samples. S/U or letter grading.

211A. Comparative Research Methods. (4-4) Lecture, three hours. In Progress (211A) and S/U or letter (211B) grading. 211A. Strategies of Research and Conceptualization. Topics include relationship of theoretical propositions, research design, and substantive paradigms of comparative and historical analysis. Reading involves methodological examination of basic works in comparative and quantitative survey research. Techniques. Requisite: course 211A. Topics include problem of evidence, quantitative and qualitative data. Techniques of data analysis, including use of microcomputer, computer analysis, collective biography, and secondary analysis.

212A. Quantitative Data Analysis. (4) Lecture, three hours; discussion, one hour. Enforced requisites: courses 210A, 210B. Course 212A is enforced requisite to 212B. Analysis and interpretation of primarily nonexperimental quantitative data, with focus on sample survey and census data. Extensive practice at utilizing statistical methods encountered in previous courses, culminating in term paper proposal in style of American Sociological Review or similar journal article. Topics include simple tabular analysis, correlation, log-linear analysis, ordinary least squares regression, logistic regression with and without interaction, diagnostic procedures, and methods for handling complex sample survey designs. In Progress grading (credit to be given only on completion of course 212B).

212B. Quantitative Data Analysis. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 212A. Analysis and interpretation of primarily nonexperimental quantitative data, with focus on sample survey and census data. Extensive practice at utilizing statistical methods encountered in previous courses, culminating in term paper proposal in style of American Sociological Review or similar journal article. Topics include multiple regression, logistic regression with and without interaction, diagnostic procedures, and methods for handling complex sample survey designs. In Progress grading (credit to be given only on completion of course 212B).

212C. Study Design and Other Issues in Quantitative Data Analysis. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 212A. Analysis and interpretation of primarily nonexperimental quantitative data, with focus on sample survey and census data. Extensive practice at utilizing statistical methods encountered in previous courses, culminating in term paper proposal in style of American Sociological Review or similar journal article. Topics include multiple regression, logistic regression with and without interaction, diagnostic procedures, and methods for handling complex sample survey designs. In Progress grading (credit to be given only on completion of course 212B).
M213A. Introduction to Demographic Methods. (4) (Same as Biostatistics M208, Community Health Sciences M208, and Economics M208.) Lecture, four hours. Preparation: one introductory statistics course. Introduction to methods of demographic analysis. Topics include demographic rates, standardization, decomposition of differences, life tables, survival analysis, cohort analysis, birth interval analysis, models of population growth, stable populations, population projection, and demographic data sources. Letter grading.

213B. Applied Event History Analysis. (4) Lecture, three hours. Preparation: exposure to binary response models. Regression models for time-to-event data, introduction to regression-like analyses in which outcome is time to event. Topics include logit models for discrete-time event history models; piecewise exponential hazard models; proportional hazards models; nonproportional hazards; parametric survival models; heterogeneity; multilevel survival models. S/U or letter grading.


216A-216B. Survey Research Design. (4-4) Lecture, nine hours; discussion, nine hours. Requisite: course 210A. History of survey methods; facet metatheory and concept construction; questionnaire and item design; scales, indices typologies; data collection—planning and management; network, snowball, and experience sampling; multistage probability sampling, stratification, and poststratification. Students participate in survey research project. Letter grading.


217B-217C. Ethnographic Fieldwork. (4-4) Seminar, three hours. Recommended requisite: course 217A. Theories and techniques of ethnographic fieldwork. Kinds of problems amenable to ethnographic approaches; specific techniques for doing fieldwork, and ethnical problems involved in such research. In Progress (217B) and letter (217C) grading.

220. Self and Society. (4) Lecture, three hours. Examination of social and cultural processes shaping definition and construction of the self, embodied interactional practices through which the self is constructed in everyday and institutional contexts, formation and transformation of self during life course, and construction of collective identity. Letter grading.

222A. California Population Research Topical Seminar Series. (4) (Same as Economics M220A.) Seminar, three hours. Examination of issues such as demography, health, aging, labor, and broad array of topics concerned with effects of economic, social, and transportation innovations on human behavior both in U.S. and abroad. May be taken independently for credit. S/U or letter grading.


227. Sociology of Knowledge. (4) Lecture, three hours. Designed for graduate students. Survey of theories and research concerning social determinants of systems of knowledge and role of intellectual and artistic elites in Western societies. S/U or letter grading.

229B. People-Processing Institutions. (4) Lecture, three hours. Preparation: course C229A is not requisite to 229B. Theory and research analyzing operation and decision-making processes of variety of people-processing institutions, including polices, courts, schools, psychiatry, human service agencies, and medicine. Letter grading.

230A-230B. Comparative Ethnicity, Race, and Nationalism. (4-4) Seminar, three hours. Preparation for independent work in area of comparative race ethnicity, race, and nationalism through close reading of key theoretical and empirical works. S/U or letter grading.

230C. Comparative Ethnicity, Race, and Nationalism. (4) Seminar, three hours. Introduction to comparative and historical sociology of race and ethnicity to demonstrate merits of double comparative approach to race, one that strives to be as comparative at level of theory (attending to relationship between race and other forms of social classification, including ethnicity and nationality) as it does at level of research. Exploration of cases from wide variety of countries, including Australia, Dominican Republic, Haiti, Mexico, modern China, modern Japan, Nazi Germany, Nicaragua, Rwanda, South Africa, Sudan, and U.S. S/U or letter grading.

231A. Race, Class, and Gender: Constructing Black Womanhood and Black Manhood in America. (4) (Same as African American Studies M2000.) Seminar, four hours. Race, class, gender, and sexual identity are axes of stratification, identity, and experience. They are not merely identities but structural lociations that are often taken for granted and rarely confronted, challenged, or contested. Many times one or more of these go unrecognized. Exploration of multiple and intersecting ways these concepts shape society, individual life chances, and daily social interactions for African Americans. Examination of race, class, and gender as individual identities and to the formation of social identity. How race, class, gender, and sexual identity shape societies and individual experiences in interaction with each other. How these inequalities shape and are shaped by social institutions, including cultural institutions, economy, and family, with context of experiences of black women and black men in contemporary U.S. Letter grading.

232. Class, Politics, and Society. (4) Lecture, four hours. Nature of class structure and how it affects formulation of class structure to politics and political power. Issue of salience of class versus other identities such as gender, age, race, and nationalism. Examination of contemporary theories of capitalism. Letter grading.

233. Foundations of Political Sociology. (4) Lecture, three hours. Designed for graduate students. Survey of field of political sociology, oriented around critical themes in major theoretical traditions and contemporary exemplars. Special attention to competing perspectives on power, theory of state, and relationship of class structure to politics. S/U or letter grading.

234. Sociology of Development. (4) Seminar, three hours; discussion, one hour. Readings and discussion of theoretical, historical, and specific issues in sociology of development (e.g., world system theory, developmental state, import substitution industrialization, export promotion industrialization, neoliberalism in Latin America, new approaches). S/U or letter grading.

235A-235B. Race/Ethnicity in U.S. (4-4) Formerly numbered 235 and 265. Lecture, three hours. Survey of theoretical and empirical literature on race, ethnicity, and immigrant groups in U.S. to provide comparative analysis of racial/ethnic groups as well as provide detailed knowledge of particular racial/ethnic groups, to situate contemporary experiences within historical contexts, to understand structural integrations into U.S. society (i.e., structural assimilation or socioeconomic mobility), and to examine theoretical approaches to understanding race and ethnicity in contemporary society. Preparation for field examination in race and ethnicity. S/U or letter grading.

236A-M236B-M236C. International Migration. (4-4-4) Lecture, three hours.

236A. (4) Lecture, three hours. Comprehensive overview of current key theoretical debates in study of international migration, with emphasis on exploring both theoretical debates of field and empirical data and case studies on those debates hinge, to encourage students to undertake research in field. S/U or letter grading.

236C. (4) Lecture, three hours. Designed for students beginning or undertaking original research in field of international migration. Outside lectures, oral presentations of student projects, circulation of completed or draft student papers. S/U or letter grading.

237. Seminar: Theory and Research in Comparative Social Analysis. (2) Seminar, two hours. Designed for graduate students. Emphasis on one issue of particular importance in comparative analysis of capitalism and socialism, North America and Western Europe, developed capitalist and socialist countries and Third World, and implications for theory construction and social research.

238. Feminist Theory. (4) (Same as Gender Studies M238.) Seminar, three hours. Designed for graduate students. Analysis of current American feminist theory relevant to sociologists. Exploration of critiques of second wave feminism by working class feminists and/or feminists of color, feminist scholars from other countries, and recent “antifeminist” feminists, Discussion of directions for future feminist sociology. Letter grading.

239A-239B. Social Stratification, Mobility, and Inequality. (4-4) Lecture, three hours. Enforced requisites: courses 210A, 210B. Course 239A is enforced requisite to 239B. Introduction on social stratification, mobility, and inequality in U.S. and abroad, with focus on concepts, data, methods, and facts about occupational and class structure; intergenerational transmission of status; effects of family, school, and labor market on socioeconomic achievement, careers, and inequality; earnings, income, and wealth distribution; poverty; social mobility; socioeconomic factors and marriage; gender and ethnic stratification; and health disparities. In Progress (239A) and letter (239B) grading.

241. Theories of Gender in Society. (4) Lecture, one hour; discussion, two hours. Gender stratification in society and sociology of diversity in human societies past and present; why gender is absent in classical macrosociology; can masculinist par...
admits make space for gender or does feminist-informed sociology necessitate fresh approach? S/U or letter grading.

244A-244B-244C. Conversation Analysis I, II, III, (6-6-6) Lecture, three hours; discussion, two hours. S/U or letter grading. Requisites: introduction to some structures basic to organization of conversational interaction: organization of repair, and practices of word selection and reference to persons, places, time, and action. 244C. Requisites: courses 210A. Continuation of introduction to some structures basic to organization of conversational interaction: organization of repair, and practices of word selection and reference to persons, places, time, and action. 244C. Requisites: courses 210A. Continuation of introduction to some structures basic to organization of conversational interaction: practices of action formation, story-telling organization, and overall structural organization of single conversation.

245. Cultural Sociology: Classical and Contemporary Approaches. (4) Lecture, one hour; discussion, two hours. Exploration of classical approaches to cultural dimension of social life—Weberian, Durkheimian, Parsonsian, and critical—and living traditions they have spawned. Examination of contemporary efforts at constructing new cultural sociology. Theoretical focus, with consideration of case studies. S/U or letter grading. 246. Sociology of Culture. (4) Seminar, three hours. Theoretical and methodological issues in structural approaches to culture. Perspectives include cultural economics, political economy, and production of culture. S/U or letter grading. 247. Sociology of Emotions. (4) Lecture, two hours; discussion, one hour. Designed for graduate students. Sociological theories of emotional expression; experiential approaches to emotions: motivational, cognitive, psychophysiological, and behavioral; repression, social oppression, and emotions; creativity and expressed affect; thought, sensations, and emotions; special emotional differences in emotional expression; measurement of emotions. Letter grading.

248. Selected Topics in Culture and Society. (4) Seminar, three hours. Designed for graduate students. Seminar on selected topics in culture and society. Consult Schedule of Classes for topics and instructors. May be repeated for credit. S/U or letter grading. 249. Sociology of Health. (4) Seminar, three hours. Exploration of literature of human health as product of society. Macro focus and micro focus used to examine relevance of macro organizational features of national society (culture, economy, politics) while maintaining understanding of two pathways that link these wider influences to personal experience (mind, body, emotion). Main focus on modern industrial society and organized around many leading issues in sociology of health. S/U or letter grading.

251. Social Movements. (4) Seminar, three hours. In-depth exploration of current theoretical debates and empirical research on social movements, collective action, and contentious politics, examining case studies, comparative analyses, and large-N investigations, with focus on developing student expertise in understanding social movement research and conceptualizing research projects. S/U or letter grading.

252. Selected Topics in Sociology of Gender. (4) (Same as Gender Studies M252.) Lecture, two hours; discussion, two hours. Designed for graduate students. Seminar on selected topics in sociology of gender. May be repeated for credit. Letter grading.

253. Politics of Reproduction, Gender, and Family. (4) Seminar, three hours. Human reproduction and its regulation have long been focus of contentious politics around world and remain topical today. Reproduction relates to family and social reproduction; their interdependence shapes policies and practices pertaining to them. Government efforts to influence fertility behavior call attention to one important fertile field: political intervention into private life, intimacy, and sexuality. Politics of reproduction refers to intersection between politics and life cycle, or between public sphere and private lives. Expansion of state into bodies and lives of citizens has blurred lines between public and private interests. Exploration of diverse aspects of politics of reproduction, their gendering, and their impact on changing family forms to encourage students to think comparatively and historically about these issues in different contexts and cultures. Letter grading.

254. Human Capital, Social Capital, and Cultural Capital. (4) Lecture, three hours. Designed for graduate students. Intellectual history of these concepts, points of convergence and divergence among these concepts, current exemplars of research that utilize these concepts, and critical reflection on research traditions. Letter grading.

255. Cross-Cultural Perspectives on Gender. (4) Seminar, three hours. Designed for graduate students. Selection of diverse perspectives on gender. How does gender manifest itself in lives of different groups of women in U.S. and abroad? Are universal analytical categories or unified feminist movements possible or is gender too different cross-culturally? S/U or letter grading.


257. Demography of Marriage Formation and Dissolution. (4) Discussion, one hour; lecture, four hours. Intensive study of marriage formation and dissolution, with focus primarily on demographic aspects of marriage. Letter grading.

258. Talk and Social Institutions. (4) Lecture, four hours; discussion, one hour. Practices of communication and social interaction in number of major institutional sites in contemporary society. Setting varies but may include emergency services, police and courts, medicine, news interviews, and political oratory. Concurrently scheduled with course CM125. S/U or letter grading.

259. Economy and Society: Discussion, two hours. (4) Discussion, two hours. Designed for graduate students. Review and critique of major analytical traditions in economy and society. S/U or letter grading.

260. Black Families and Relationships. (4) (Same as African American Studies M260C.) Seminar, three hours. Examination of social, cultural, and historical forces that affect socialization, stability, and interaction in black intimate relationships, beginning with theoretical framework from black feminism to analysis of economic and other expectations for partners in cohabiting and other types of unions. Examination of family life for both middle-class and low-income populations. Exploration of family diversity, including images of hyper-masculinity and femininity within black body and critical interrogation of notions of blackness and authenticity in racial identification. Concluding discussion of black intimate relationships in different contexts, including lesbian and gay identities, Caribbean and other ethnic identities, and interracial intimacies. S/U or letter grading.

263. Social Demography of Los Angeles. (4) (Same as Community Health Sciences M263.) Lecture, three hours. Designed for graduate students. Use of city of Los Angeles to examine major social and demographic factors that characterize cities in the U.S. Examination of role of these factors in affecting health outcomes. Letter grading.


266. Selected Problems in Analysis of Conversational Interaction. (4) Lecture, three hours. Requisites: courses 210A, 210B. Variable topics/formats course. Consult instructor for topics and formats to be offered in specific term. May be repeated for credit with topic change. S/U or letter grading.

268. Selected Problems in Psychoanalytic Sociology. (4) Discussion, three hours. Recommended preparation: at least one year of methods courses. Selected problems in interpretation of sociology and psychoanalytic, which may be substantive (group development, socialization, culture, deviance, collective behavior) or methodological; latter focuses on clinical fieldwork and experimental sociological and sociotechnical techniques. S/U or letter grading.

272. Topics in Political Sociology. (4) Lecture, four hours. S/U or letter grading.


278. Sociology of Latin America. (4) Lecture, one hour; discussion, two hours. Designed for graduate students. Survey of some sociological study of Latin America. Possible topics include social movements, race and ethnicity, stratification, and social development. Letter grading.

280. Trafficking, Gender, Health, and Human Rights. (4) (Same as Law M567.) Seminar, four hours. Review and critical assessment of diverse literature on international trafficking of persons, with emphasis on significance of sociological, legal, and gender aspects of trafficking. Prior focus on trafficking for sex work and blurred lines between discourse on commercial sex trade and trafficking. Additional issues include role of political and economic transition, militarization, health implications of trafficking for non-sexual labor, and role of advocacy. S/U or letter grading.

281. Selected Problems in Mathematical Sociology. (4) Lecture, three hours. Designed for graduate students. Some mathematical models of sociological processes. Possible topics include models of small groups, social mobility, kinship relations, organizations, social interaction, S/U or letter grading.

282. Sociology of Medicine. (4) Seminar, three hours. Review of major concepts and issues in sociology of medicine. Topics include medicine, culture, and capitalism, professions and power, challenge of managed care, sick role and social control, intersection and negotiation of sickness, sickness and self, debates over medicalization and demedicalization. Designed as preparation for field examination in sociology of health and medicine and specifically for themes traditionally included under medical science/sociology of medicine. S/U or letter grading.

283. Communication in Medical Care. (4) Seminar, three hours. Review and development of empirical knowledge about doctor-patient interaction. Analysis of nature and dynamics of routine office visits, with focus on nature and role of norms in regulating doctor-patient conduct, role of expertise and power in doctor-patient relationship, and methodological questions concerning how doctor-patient relationship can be analyzed. S/U or letter grading.


287. Topics in Chinese Society. (4) Seminar, three hours. Preparation: at least two upper-division courses on China in any social sciences discipline. Introduction to current research questions in Chinese sociology, as well as major themes in study of Chinese society, both historical and contemporary, including demographic, economic, political, and social change before and after 1949. S/U or letter grading.

289A-289B. Practicum in Conversation Analysis. (2-4) Requisites: courses 244A, 244B. S/U or letter grading. 289A. Practicum in Analysis, Laboratory, two hours. Practice in analysis of conversational data. May be repeated for credit. 289B. Developing Work in Progress. Seminar, three hours. Opportunity to advance research projects in progress, presentation of constructs, criticism, discussion of work others.

**South Asian Studies**

See International and Area Studies

**Southeast Asian Studies**

See International and Area Studies

**Spanish and Portuguese**

*College of Letters and Science*

5310 Rolfe Hall
Box 951532
Los Angeles, CA 90095-1532
310-825-1036
spoffice@humnet.ucla.edu
http://www.spanport.ucla.edu

Héctor V. Calderón, PhD, Chair

Professors
Adriana J. Bergero, PhD
Héctor V. Calderón, PhD
Verónica Cortínez, PhD
John C. Dagenais, PhD
Maria (Maite) T. de Zubiaurre, PhD
Barbara Fuchs, PhD
J. Randal Johnson, PhD
Elfrain Kristal, PhD
José Luiz Passoa, PhD
A. Carlos Quicoli, PhD
Teófilo F. Ruiz, PhD
Jesús Toméccila, PhD
Maarten H. van Delden, PhD

Professors Emeriti
Shirley L. Arora, PhD
Rubén A. Benítez, PhD
E. Mayonne Dias, PhD
Joaquín Gimeno, PhD
Claude L. Hulet, PhD
Gerardo A. Luzuriaga, PhD
C. Brian Morris, Littd
J. Randal Johnson, PhD
José Pascual Buixó, PhD
Enrique Rodríguez-Cepeda, PhD
Paul C. Smith, PhD

Associate Professor
Jorge Marturano, PhD

Assistant Professors
Patricia Arroyo Calderón, PhD
Ji-Young Kim, PhD
Javier Patiño Loira, PhD

Lecturers
Luíz Maria de la Torre, MA
Juliet A. Falce-Robinson, PhD

**Scope and Objectives**

The Department of Spanish and Portuguese is dedicated to the study and teaching of the languages, literatures, and cultures of the Hispanic heritage in all areas of the world, particularly on the continents of Europe and America. It maintains a strong commitment to the value of original research and professional instruction at all levels of its activities.

Whether studying for the BA, MA, or PhD degree, students are given careful guidance in the choice of courses and in the preparation of a study program. The richness of Hispanic culture is amply represented in the extensive range of courses in language, linguistics, and literature. Although the literatures of Spain, Portugal, Brazil, and Spanish America predominate, courses are also offered in Chicano literature. The breadth of courses offered by the department allows undergraduate students to pursue many possible interests and enables graduate students to concentrate in depth in several areas of specialization.

Department courses are primarily designed to serve the five BA programs: BA in Spanish, BA in Spanish and Community and Culture, BA in Spanish and Linguistics, BA in Spanish and Portuguese, and MA in Portuguese, as well as to prepare students for their three graduate programs: MA in Spanish, MA in Portuguese, and PhD in Hispanic Languages and Literatures. The courses are also functionally supportive of such interdepartmental programs as the BA, MA, and PhD programs in Chicana and Chicano Studies, BA and MA programs in Latin American Studies, and MA and PhD programs in Comparative Literature.

**Undergraduate Study**

Two of the majors in the Spanish and Portuguese Department are designated capstone majors: Spanish, and Spanish and Community and Culture. For the Spanish major, seniors complete a capstone seminar that provides unique opportunity to work closely with a faculty member on a focused topic of research. Through their capstone work students are expected to demonstrate mastery of the Spanish language, along with specific skills and expertise acquired in earlier coursework. Additionally, students acquire a working knowledge of scholarly discourse relative to a specialized topic, conceive and execute an associated project, and engage with a community of scholars, presenting their work to peers and helping to further peers’ work through discussion and critique.

For the Spanish and Community and Culture major, undergraduate students participate in community-based experiential learning courses coupled with elective and adjunct courses. Reflective journals, final projects, and in-class presentations are required. Through their capstone work, students should have mastery of the Spanish language, ability to conduct and interpret research to determine the needs of specific communities, critical understanding and ability to apply theories within a service context, sensitivity to diversity and cultural dif-
Undergraduate Courses
Spanish 1 through 3 use Únidos. The method is inductive. Selected examples are given to enable students to inductively grasp the rules and develop their own grammar. This enables students to use language effectively and creatively. The courses are taught entirely in Spanish—students simultaneously learn to understand, speak, read, and write Spanish.

Students with one or more years of high school Spanish who plan to enroll in Spanish 1 through 25 should take the departmental online placement examination. Consult the Schedule of Classes or the department office for more information.

No credit is allowed for completing a less advanced course after successful completion of a more advanced course in Spanish and Portuguese grammar and/or composition.

Spanish BA

Capstone Major

Preparation for the Major

Required: Spanish 25 or 27 or equivalent, and 42 and 44 or equivalent as determined by the undergraduate adviser. Each course must be passed with an average grade of C or better prior to beginning upper-division work in the major.

Transfer Students

Transfer applicants to the Spanish major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of Spanish, one Spanish civilization course, and one Spanish American civilization course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: (1) Spanish 100A or 100B, and 119 or 120; (2) four elective Spanish literature, culture, linguistics, or media studies courses selected from: 130, 135, 140, 150, 155C, 160, 170, 175, 195; (3) two interdisciplinary studies courses selected from Chicana and Chicano Studies 100SL, CM106, M119, 120, M121, M122, 131, M144, 149, 181, Sociology M155; (4) two capstone community-based and experiential learning courses (8 to 10 units) selected from Chicana and Chicano Studies 100SL, Spanish M165SL, M172SL.

A minimum of 46 units applied toward the major requirements must be in addition to units applied toward major or minor requirements in another department or program.

Spanish and Linguistics BA

Preparation for the Major

Required: Spanish 25 or 27, M35 (or Linguistics 20), 42 or 44. Each course must be passed with an average grade of C or better prior to beginning upper-division work in the major.

Transfer Students

Transfer applicants to the Spanish and Linguistics major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of Spanish, one introduction to linguistics course, and one Spanish or Spanish American civilization course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: (1) Spanish 100A or 100B, Linguistics 103, 120A, 120B, (2) one course from Linguistics 160 or 165A or 165B, and (3) four upper-division Spanish electives, two of which must be from Spanish 160.

Spanish and Portuguese BA

Preparation for the Major

Required: Spanish 25 or 27, 42 or 44, Portuguese 25 or 26 or 27 (27 recommended), and 46.

Transfer Students

Transfer applicants to the Spanish and Portuguese major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of Spanish, one year of Portuguese, one Spanish civilization course or one Spanish American civilization course, and one Brazilian culture course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: (1) One course from Spanish 100A or 100B and one course from Portuguese 100A or 100B, (2) Spanish 119, 120, Portuguese 130A, 130B, (3) five 4- or 5-unit upper-division elective courses, two of which must be in Spanish and two in Portuguese. Only upper-division courses taught in the target language may be applied toward the major.

Portuguese BA

Preparation for the Major

Required: Portuguese 25 or 26 or 27 (27 recommended), and 46, or equivalent.

Transfer Students

Transfer applicants to the Portuguese major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of Portuguese, one nature of language course, one Portuguese civilization course or one Brazilian civilization course, and one Brazilian culture course.

Refer to the UCLA Transfer Admission Guide for up-to-date information regarding transfer selection for admission.

The Major

Required: Ten upper-division courses (45 units minimum), including Portuguese 100A or 100B, 130A, 130B, and seven elective courses selected from 100A through 199. Two courses from outside the department that focus on Brazil, Portugal, or Lusophone Africa may be applied toward the major with approval of the undergraduate adviser. A minimum of eight of the 10 courses must be taught in Portuguese.

Double Majors

Through judicious use of electives, students may find it possible to secure the BA degree with two complete majors (e.g., Portuguese/Spanish, Portuguese/History, Portuguese/Sociology, etc.). Interested students should consult with the undergraduate adviser in Portuguese as early as possible in their BA program.

Study in a Portuguese-Speaking Country

Students are encouraged to spend up to one year in a Portuguese-speaking country to study in a university or conduct research. Appropriate credit may be granted in accordance with the individual program, arranged in consultation with the undergraduate faculty adviser in Portuguese. Proposals must be submitted in advance in writing and must be approved by the department.

Honors Program

The departmental honors program is open to majors who have completed a minimum of six upper-division major courses with a 3.7 grade-point average or better in those six courses. Eligibility is verified by the departmental counselor. On the basis of their coursework and special interests, students then consult with a faculty member in that field and formulate a research project that they pursue under the fac-
ulty member's guidance through Portuguese 198A-198B or Spanish 198A-198B. Portuguese 198A and Spanish 198A are 4-unit courses in which students research and prepare a draft of a thesis on a selected topic; Portuguese 198B and Spanish 198B are 2-unit courses in which students complete the final thesis draft of approximately 25 to 30 pages. Approval of the honors thesis by the faculty mentor is the final requirement for departmental honors. Portuguese 198A-198B and Spanish 198A-198B may not be applied toward the majors.

Mexican Studies Minor
The Mexican Studies minor allows students with an interest in Mexico to augment their major programs with courses that expose them to the history, literature, and culture of Mexico. Given Southern California's proximity to Mexico, the demographics of Los Angeles, and the shared history of Mexico and the Southwest, the minor is a natural complement to many majors.

To enter the minor, students must have an overall grade-point average of 2.0 or better and must complete or show proficiency equivalent to two years of college-level Spanish. A petition to declare the minor should be filed with the undergraduate counselor in 5314 Rolfe Hall.

Required Lower-Division Courses (8 to 9 units): Spanish 25 or 27, and one course from History 8A, 8B, 8C, or Spanish 44.

Required Upper-Division Courses (20 to 22 units): Three Mexican culture and literature courses selected from Spanish 135 through 175 in consultation with the undergraduate adviser and two courses from Anthropology 114P, Chicana and Chicano Studies M102, M109A, 120, M125, M132, 142, 172, 184, Ethnomusicology M108A, Geography 181, History 157B, 160B.

By petition and consultation with the undergraduate adviser, one 4-unit 197 or 199 course may be applied toward the minor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Portuguese Minor
To enter the Portuguese minor, students must have an overall grade-point average of 2.0 or better and must complete Portuguese 27 or equivalent.

Required Lower-Division Courses (9 units): Portuguese 25 or 26 or 27 (27 recommended), and 46.

Required Upper-Division Courses (20 units): Five courses selected from Portuguese 100A through 199, three of which must be taught in Portuguese. Only one 4-unit Portuguese 197 or 199 course may be applied toward the minor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Spanish Minor
To enter the Spanish minor, students must have an overall grade-point average of 2.0 or better and must complete or show proficiency equivalent to two years of college-level Spanish.

Required Lower-Division Courses (9 units): Spanish 25 or 27, and 42 or 44.

Required Upper-Division Courses (20 to 22 units): Spanish 119 or 120 and four Spanish literature, culture, linguistics, service learning, or media studies courses.

By petition and after consultation with the undergraduate adviser, one 4-unit 197 or 199 course may be applied toward the minor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Spanish Linguistics Minor
To enter the Spanish Linguistics minor, students must have an overall grade-point average of 2.0 or better and must complete or show proficiency equivalent to two years of college-level Spanish.

Required Lower-Division Courses (9 units): Spanish 25 or 27, and M35.

Required Upper-Division Courses (20 to 21 units): Spanish 100A, 100B, and three upper-division Spanish electives, two of which must be from Spanish 160.

By petition and after consultation with the undergraduate adviser, one 4-unit 197 or 199 course may be applied toward the minor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of Spanish and Portuguese offers the Master of Arts (MA) degree in Spanish, Master of Arts (MA) degree in Portuguese, and Candidate in Philosophy (CPhil) and Doctor of Philosophy (PhD) degrees in Hispanic Languages and Literatures.

Indigenous Languages of the Americas
Lower-Division Courses


M5A-M5B-M5C. Elementary Nahuatl. (4-4-4) (Same as Chicana and Chicano Studies M5A-M5B-M5C and International and Area Studies M5A-M5B-M5C.) Lecture, five hours. Course M5A is enforced requisite to M5B, which is enforced requisite to M5C. Introduction to Aztec language of central Mexico. Coverage of basic Nahuatl grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

M15A-M15B-M15C. Intermediate Nahuatl. (4-4-4) (Same as Chicana and Chicano Studies M15A-M15B-M15C and International and Area Studies M15A-M15B-M15C.) Lecture, four hours. Enforced requisites: courses M5A, M5B, M5C. Course M15A is enforced requisite to M15B, which is enforced requisite to M15C. Taught primarily in Nahuatl. Examination of Nahuatl (Aztec) language of central Mexico at intermediate level. Coverage of Nahuatl grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

17. Intensive Elementary Quechua. (12) Lecture, 15 hours; laboratory, five hours. Intensive course equivalent to courses 18A, 18B, 18C. Language of Incas and its present-day dialects, as spoken in Andean South America. Offered in summer only. Letter grading.

18A-18B-18C. Elementary Quechua. (4-4-4) Lecture, five hours. Course 18A is enforced requisite to 18B, which is enforced requisite to 18C. Language of Incas and present-day Quechua language, as spoken in Andean South America. P/NP or letter grading.

Upper-Division Courses
119A-119B-119C, Advanced Quechua. (4-4-4) Lecture, five hours. Requisite: course 18C. Course 119A is requisite to 119B, which is requisite to 119C. Readings in Quechua. Dialectal and stylistic variation. Discussions mainly in Quechua. P/NP or letter grading.

191. Variable Topics Research Seminars: Indigenous Languages. (2 or 4) Seminar, three hours. Research seminars on selected topics on various indigenous languages. Reading, discussion, and development of culminating project. May be repeated for credit with topic change. P/NP or letter grading.

Graduate Course
596. Directed Studies in Quechua. (1 to 8) Tutorial, to be arranged. Requisites: courses 119A, 119B, 119C. Directed individual study or research in Quechua. Four units may be applied toward MA course requirements. May be repeated for credit. S/U grading.
Portuguese

Lower-Division Courses

1. Elementary Portuguese. (4) Lecture; three hours; laboratory; two hours. Taught in Portuguese. Laboratory is online. Introductory Portuguese language and culture course that is proficiency-oriented, communicative, and task-based to help develop communicative competence in four skill areas (listening, speaking, reading, and writing) as well as cultural competence. P/NP or letter grading.

2. Elementary Portuguese. (4) Lecture; three hours; laboratory; two hours. Taught in Portuguese. Laboratory is online. Introductory Portuguese language and culture course that is proficiency-oriented, communicative, and task-based to help develop communicative competence in four skill areas (listening, speaking, reading, and writing) as well as cultural competence. P/NP or letter grading.

3. Intermediate Portuguese. (4) Lecture; three hours; laboratory; two hours. Taught in Portuguese. Laboratory is online. Intermediate Portuguese language and culture course that is proficiency-oriented, communicative, and task-based to help develop communicative competence in four skill areas (listening, speaking, reading, and writing) as well as cultural competence. P/NP or letter grading.

25. Advanced Portuguese. (4) Lecture; three hours. Enforced requisite: course 3 or 11B. P/NP or letter grading.

25A. Advanced Portuguese: Summer Course. (4) Lecture; 20 hours. Enforced requisite: course 3 or 11B. Advanced Portuguese course with cultural activities, field trips, and luncheons. Offered in summer only. P/NP or letter grading.

26. Language and Popular Culture. (4) Lecture; three hours. Enforced requisite: course 3 or 11B. Development of speaking, reading, and writing skills. Structured in thematic units, with songs, videos, and specific vocabulary emphasizing questions of Brazilian cultural identity. Letter grading.

26A. Language and Popular Culture: Summer Course. (4) Lecture; four hours. Enforced requisite: course 3 or 11B. Development of speaking, reading, and writing skills. Structured in thematic units, with songs, videos, and specific vocabulary emphasizing questions of Brazilian cultural identity. Includes cultural activities, field trips, and luncheons. Offered in summer only. P/NP or letter grading.

27. Advanced Composition and Style. (4) Lecture; three hours. Enforced requisite: course 3 or 11B. Practice in writing Portuguese with appropriate vocabulary, syntactical structures, and stylistic patterns. P/NP or letter grading.

27A. Advanced Composition and Style: Summer Course. (4) Lecture; 20 hours. Enforced requisite: course 3 or 11B. Practice in writing Portuguese with appropriate vocabulary, syntactical structures, and stylistic patterns. Includes cultural activities, field trips, and luncheons. Offered in summer only. P/NP or letter grading.

M35. Spanish, Portuguese, and Nature of Language. (5) Same as Spanish M35. Lecture; three hours; discussion; one hour. Introduction to language study within context of Romance languages, focusing on Spanish, Portuguese. Nature of language: structure, diversity, evolution, social and cultural settings, literary uses. Study of language and its relation to other areas of human knowledge. P/NP or letter grading.

Upper-Division Courses

100A. Phonology and Morphology. (4) Lecture; four hours. Enforced requisite: course 27. Analysis of phonetic, phonemic, and morphological systems of Portuguese. P/NP or letter grading.


110A-110B. Introduction to Literature in Portuguese. (4-5) Lecture; four hours. Requisite: course 27. Introduction to literary development and authors from Brazil in context of Portuguese-speaking world. P/NP or letter grading.

114A. Literature and Film in Portuguese. (4) Lecture; four hours. Taught in English. Study of intertextuality and dialogueism, interactions between literary and cinematic fields, questions of fidelity, and equivalents between literary and cinematic expression in Portuguese-speaking world. May be repeated for credit with topic change. P/NP or letter grading.

114B. Film, Television, and Society in Brazil. (4) Lecture; four hours. Taught in English. Study of development, evolution, and impact of film and television in Brazil against backdrop of broader social, historical, and cultural contexts. May be repeated for credit. P/NP or letter grading.

114C. Documentary Film. (4) Lecture; four hours. Taught in English. Overview of documentary film production in Portuguese-speaking world, with special focus on period since 1985. May be repeated for credit with topic change. P/NP or letter grading.

142A. Brazil and Its Culture. (4) Lecture; four hours. Taught in English. Exploration of roots of contemporary Brazil through study of broad chronological periods from Portuguese colonization to present and how they shaped idea of Brazilian exceptionalism, racial mixture as source of national identity, and lusotropicalism and its influence on Brazilian historiography. May be repeated for credit with topic change. P/NP or letter grading.

142B. Brazil and Portugal in Comparative Perspective. (4) Lecture; four hours. Taught in English. Study of social and cultural links between Portugal and Brazil, with emphasis on issues of migration, dialogue, and contention in historical context. May be repeated for credit with topic change. P/NP or letter grading.

142C. Travel Narratives, Testimony, Autobiography. (4) Lecture; four hours. Taught in English. Exploration of travel, memory, and narrative in Portuguese-speaking primary and secondary texts depicting issues of displacement, cultural contact, and assimilation. Overview of connections among Portuguese-speaking cultures. May be repeated for credit with topic change. P/NP or letter grading.

143A. Colony, Intellectuals, and History. (4) Lecture; four hours. Enforced requisite: course 27. Investigation of way that Brazilian maritime expansion from 15th to early 19th centuries was interpreted in writings from across empire. May be repeated for credit with topic change. P/NP or letter grading.

143B. Transatlantic Literature in Portuguese. (4) Lecture; four hours. Enforced requisite: course 27. Study of modern relations between Portugal and Portuguese-speaking world in literature and arts. May be repeated for credit with topic change. P/NP or letter grading.

143C. Modernism, Modernity, and Identity. (4) Lecture; four hours. Enforced requisite: course 27. Examination of concepts and practice of modernism in Portuguese-speaking world, with primary focus on 1920s. Reading and discussion, with emphasis on sociohistorical context, relations with European avant-garde, modernist poetics and polemics, and search for national identity as expressed in period’s poetry and prose. May be repeated for credit with topic change. P/NP or letter grading.

143D. Contemporary Literature in Portuguese. (4) Lecture; four hours. Enforced requisite: course 27. Exploration of connections between literatures of Angola, Brazil, and Portugal against background of globalization and Internet. May be repeated for credit with topic change. P/NP or letter grading.

187FL. Special Studies: Readings in Portuguese. (2 to 4) Seminar; two hours. Requisite: course 27. Students must be concurrently enrolled in affiliated main course. Additional work in Portuguese to augment work assigned in main course, including reading and writing assignments. May be repeated for credit. P/NP or letter grading.

191. Undergraduate Variable Topics Seminars: Portuguese. (4) Seminar; three hours. Requisite: coreq. for Research seminars in Portuguese. Reading, discussion, and development of culminating project. Consult Schedule of Classes or department counselor for topic to be offered in specific term. May be repeated for credit. P/NP or letter grading.

197. Individual Studies in Portuguese. (2 to 4) Tutorial; to be arranged. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. Eight units of courses 197 and/or 199 may be applied toward major requirements. May be repeated for maximum of 8 units. Individual contract required. P/NP or letter grading.

198A-198B. Senior Honors Research in Portuguese I, II. (4-4) Tutorial; to be arranged. Preparation: completion of minimum of six upper-division major core courses with 3.7 grade point average. Course 198A is enforced requisite to 198B. Limited to juniors/seniors. Development and completion of honors thesis under direct supervision of faculty member. May not be applied toward major requirements. Individual contract required. Letter grading.

199. Directed Research in Portuguese. (2 to 4) Tutorial; to be arranged. Requisite: course 27. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Culminating paper required. Eight units of courses 197 and/or 199 may be applied toward major requirements. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

M200. Research Resources. (4) Same as Spanish M200L. Lecture; three hours. Identification and use of research resources for graduate students.

M201A-M201B. Literary Theory and Criticism. (4-4) Same as Spanish M201A-M201B. Lecture; three hours. Definition, discussion, and application of main currents of contemporary literary theory and criticism. Letter grading.

202. Synchronic Morphology and Phonology. (4) Lecture; three hours. Study of theoretical synchronic linguistics as applied to Portuguese.

204A-204B. Generative Grammar. (4-4) Lecture; three hours. Course 204A is requisite to 204B. Generative approach to the Portuguese language, with some consideration of bearing of syntax, semantics, and phonology on style, metaphor, and meter.
classical Portuguese literature through representative course 27. Study of main genres of baroque and neo-

poetry, (2) narrative and drama, (3) speech. S/U or letter grading.

M251B.) Lecture, two hours. Study of problems re-
peated for credit with topic change. S/U or letter grading.


251. Colonial Brazilian Literature and Culture. (4) Lecture, three hours. Study of selected works by Joaquim Maria Machado de Assis. S/U or letter grading.

248. Post-Romanticism and Naturalism in Portu-
guese Literature. (4) Lecture, three hours. Enforced requisite: course 27. Study of representative trends and authors. May be repeated for credit with topic change. S/U or letter grading.

247. 19th-Century Portuguese Literature. (4) Lecture, three hours. Study of works by Camões and Portuguese Renaissance. Lecture, three hours. Enforced requisite: course 27. Study of main genres of Renaissance Portuguese lit-

M205A-M205B. Development of Portuguese and Spanish Languages. (4-4) (Same as Spanish M205A-M205B.) Lecture, three hours. Intensive study of historical development of Portuguese and Spanish languages from their origin in spoken Latin.


242. 20th-Century Portuguese Literature. (4) Lecture, three hours. Enforced requisite: course 27. Study of representative trends and authors. May be repeated for credit with topic change. S/U or letter grading.

241. Colonial Brazilian Literature and Culture. (4) Lecture, three hours. Study of representative trends and authors. May be repeated for credit with topic change. S/U or letter grading.

239. Machado de Assis. (4) Lecture, three hours. Study of selected works by Joaquim Maria Machado de Assis. S/U or letter grading.


232. 19th-Century Brazilian Literature and Culture. (4) Lecture, three hours. Study of representative trends and authors. May be repeated for credit with topic change. S/U or letter grading.

1. Elementary Spanish. (4) Lecture, three hours; labora-

try, two hours. Taught in Spanish. Laboratory is online. Introductory Spanish language and culture course that is proficiency-oriented, communicative, and task-based to help develop communicative competence in four skill areas (listening, speaking, reading, and writing), as well as cultural competence. P/NP or letter grading.

1G. Reading Course for Graduate Students. (4) Lecture, three hours; labora-

try, five hours. Taught in Spanish. Laboratory is online. Introductory Spanish language and culture course that is proficiency-oriented, communicative, and task-based to help develop communicative competence in four skill areas (listening, speaking, reading, and writing), as well as cultural competence. P/NP or letter grading.

2A. Intensive Spanish. (4) Lecture, 20 hours; labora-

tory, five hours. Enforced requisite: course 1 or one year of high school Spanish. Intensive basic course in Spanish, with cultural activities, field trips, luncheons. Offered in summer only. P/NP or letter grading.

2B. Intensive Spanish. (4) Lecture, 20 hours; labora-

tory, five hours. Enforced requisite: course 1 or one year of high school Spanish. Intensive basic course in Spanish, with cultural activities, field trips, luncheons. Offered in summer only. P/NP or letter grading.

4. Intermediate Spanish. (4) Lecture, three hours; labora-

tory, two hours. Taught in Spanish. Laboratory is online. Intermediate Spanish language and culture course designed to increase communicative ability. Acquisition of cultural competence and introduction to study of literature. Comprehension of conversations and stretches of connected discourse, reading of texts with minimum use of dictionary, writing with increased grammatical accuracy and control of sentence structure, coherence, and text organization, talking about past, present, and future events, and expression of preferences, feelings, beliefs, and opinions. P/NP or letter grading.

5. Intermediate Spanish. (4) Lecture, three hours; labora-

tory, two hours. Taught in Spanish. Laboratory is online. Intermediate Spanish language and culture course designed to increase communicative ability. Acquisition of cultural competence and introduction to study of literature. Comprehension of conversations and stretches of connected discourse, reading of texts with minimum use of dictionary, writing with increased grammatical accuracy and control of sentence structure, coherence, and text organization, talking about past, present, and future events, and expression of preferences, feelings, beliefs, and opinions. P/NP or letter grading.

7A. Introductory Spanish for Heritage Speakers. (4) (Formerly numbered 7.) Lecture, three hours; labora-

tory, two hours. Laboratory is online. Designed for students who are from Spanish-speaking family background and have some knowledge of Spanish. Intermediate course to further develop communicative abilities, both verbal and written, and to increase knowledge of grammatical structures and achieve communicative competence. P/NP or letter grading.

7B. Intermediate Spanish for Heritage Speakers. (4) Lecture, three hours; laboratory, two hours. En-

forced requisite: course 3 or 7A or Spanish placement test. Laboratory is online. Designed for students who are from Spanish-speaking family background and have some knowledge of Spanish. Intermediate course to further develop communicative abilities, both verbal and written, and to increase knowledge of grammatical structures and achieve communicative competence. P/NP or letter grading.

8A-8B. Spanish Conversation. (2-2) Discussion, three hours. Course 8A is open to students with credit for course 4. Students who have completed course 3 with grade of B or better may be admitted. P/NP or letter grading.

9A-9B. Advanced Conversation. (2-2) Discussion, three hours. Enforced requisite: course 8B. P/NP or letter grading.

10. Intensive Elementary Spanish. (12) Lecture, 20 hours. Intensive elementary instruction in speaking, listening, reading, and writing equivalent to courses 1, 2, and 3, with emphasis on Spanish grammar and Hispanic culture. Offered in summer only. P/NP or letter grading.

11A-11B. Catalan Language and Culture I, II. (4-4) Lecture, six hours. Introduction to oral and written Catalan language. Two-term accelerated language sequence equivalent to three terms of traditional pat-
tern and designed for advanced undergraduate and graduate students. P/NP or letter grading. 11A. Prerequisite: at least one year of college-level Spanish, Portuguese, or another Romance language other than Catalan. 11B. Requisite: course 11A.

25. Advanced Conversation and Composition. (4) Lecture, three hours. Enforced requisite: course 5. Emphasis on development of communicative abilities, both verbal and written, as well as on increasing compre-

hension of variety of forms of cultural production in Spanish language and on preparation for more ad-
vanced Spanish courses. P/NP or letter grading.

27. Composition for Spanish Speakers. (4) Lecture, three hours. Enforced requisite: course 5. Prac-
tice in reading and writing of Spanish for students with oral proficiency in Spanish (in lieu of course 25). P/NP or letter grading.
28A. Spanish for Special Purposes: Medical. (4) Lecture, three hours. Enforced requisite: course 5. Practice in speaking, reading, and writing Spanish using appropriate vocabulary and cultural situations for students with special interest in fields such as medicine, business, law, etc. P/NP or letter grading.

M35. Spanish, Portuguese, and Nature of Language. (5) (Same as Portuguese M35.) Lecture; three hours; discussion, one hour. Introduction to language study with focus on Spanish and Portuguese. Nature of language: structure, diversity, evolution, social and cultural settings, literary uses. Study of language and its relation to other areas of human knowledge. P/NP or letter grading.

42. Iberian Culture. (5) Lecture, four hours; discussion, one hour. Required of majors. Lectures taught in English; discussion sections taught in either Spanish or English. Highlights of civilization of Spain, with emphasis on artistic, economic, social, and historical development as background for upper-division courses. P/NP or letter grading.

44. Latin American Culture. (5) Lecture, four hours; discussion, one hour. Required of majors. Lectures taught in English; discussion sections taught in either Spanish or English. Highlights of civilization of Spanish America, with emphasis on artistic, economic, social, and historical development as background for upper-division courses. P/NP or letter grading.

60A-60B-60C. Hispanic Literatures in Translation. (4-4-4) Lecture; three hours; Class readings and analysis of selected works in translation. Classroom discussion, papers, and examinations in English. 60A, Spanish Literature. 60B, Spanish-American Literature. 60C, Don Quixote.

88A-88Z. Lower-Division Seminars, (4 each) Seminar, three hours. Knowledge of Spanish not essential. Variable topics courses designed to explore various themes and issues pertinent to Hispanic literature and culture.

97. Variable Topics in Spanish, (2) Lecture, two hours. Variable topics course with lectures, discussions, and papers; consult Schedule of Classes or department counselor for topic to be offered in specific term. May be repeated for credit. P/NP or letter grading.

Upper-Division Courses

100A-100B. Introduction to Study of Spanish Grammar. (5-5) Three hours; prerequisite: course M35. P/NP or letter grading. 100A, Phonology and Morphology. Analysis of phonemic and morphological systems of Spanish. 100B, Syntax. Study of syntactical systems of Spanish.

105. Advanced Spanish Grammar。(4) Lecture, four hours. Required of course 25. Comprehensive review of Spanish grammar with attention given to advanced concepts and structures that are not covered in lower-level courses. Development of writing skills through application of grammar concepts. P/NP or letter grading.

107. Advanced Spanish Grammar for Heritage Speakers.(4) Lecture, four hours. Required of course 27. Review of standard and formal registers and advanced grammatical structures, accentuation, orthography, and avoidance of vocabulary and sentence structure. Draws from existing linguistic background to perfect grammar and writing in Spanish. Comprehensive review of Spanish grammar with attention given to advanced concepts and structures that are not covered in lower-level courses. Development of writing skills through application of grammar concepts. P/NP or letter grading.

110. Structure of Literary Work. (4) Lecture, four hours; discussion, one hour. Required of course 25. Introduction to different ways of looking at literary works as historical phenomena. Presentation of major models for writing history—great narratives, cyclic, teleological, sacred, and profane conceptions. Traditional concepts of literary history and problems of mixed categories (historical epochs versus epochs of style, national history, and world literature). P/NP or letter grading.

119. Spanish grammar with attention given to advanced concepts and structures, orthography, and avoidance of vocabulary and sentence structure. Draws from existing linguistic background to perfect grammar and writing in Spanish. Comprehensive review of Spanish grammar with attention given to advanced concepts and structures that are not covered in lower-level courses. Development of writing skills through application of grammar concepts. P/NP or letter grading.


125C. Spanish Literature. (4-4-4) Lecture, four hours; discussion, one hour. Enforced requisite: course 25. Exploration of 16th and 17th centuries, with focus on early modern period of Spain and Spanish America. Possible topics include colonization and indigenous responses, transatlantic literary and visual baroque, race and religion in construction of early modern nation, transatlantic fictions, early modern identities and theatrical representations, Iberian and Latin American conceptions of literary, religious, and linguistic knowledge acquired in Spanish classes in real-world settings. Students required to spend minimum of eight to 10 hours per week at agreed on site in Latino community. May be repeated for credit with topic change. P/NP or letter grading.

135. Topics in Early Modern Studies. (4) Lecture, Four hours; discussion, one hour (when scheduled). Enforced requisite: course 25. Exploration of the 16th and 17th centuries, with focus on early modern period of Spain and Spanish America. Possible topics include colonization and indigenous responses, transatlantic literary and visual baroque, race and religion in construction of early modern nation, transatlantic fictions, early modern identities and theatrical representations, Iberian and Latin American conceptions of literary, religious, and linguistic knowledge acquired in Spanish classes in real-world settings. Students required to spend minimum of eight to 10 hours per week at agreed on site in Latino community. May be repeated for credit with topic change. P/NP or letter grading.

140. Topics in Modern Studies. (4) Lecture, four hours. Required of course 25. Exploration of four major literary movements: Romanticism, Lyricism, Realism, and Naturalism. First course to give students opportunity to study in English. P/NP or letter grading.

145A. Introduction to Chicano Literature: Literature to 1960. (4) (Same as Chicana and Chicano Studies M145A) Lecture, three hours. Required: course 25 or 27. Introduction to texts representative of Chicano cultural heritage. Sampling of genres, as well as historical and geographical settings and points of view characteristic of work written by Chicanos during 20th century. Most required reading in Spanish, Bilingual and English works included and discussed. Reading and analysis of number of important scholarly and critical statements pertaining to characteristics and development of Chicano literary corpus. P/NP or letter grading.

145B. Introduction to Chicano Literature: 1960 to 1990. (4) (Same as Chicana and Chicano Studies M145B) Lecture, three hours. Required: course 25 or 27. Introduction to texts representative of Chicano cultural heritage. Sampling of genres, as well as historical and geographical settings and points of view characteristic of work written by Chicanos during 20th century. Most required reading in Spanish, Bilingual and English works included and discussed. Reading and analysis of number of important scholarly and critical statements pertaining to characteristics and development of Chicano literary corpus. P/NP or letter grading.

150. Topics in Contemporary Studies. (4) Lecture, four hours; discussion, one hour (when scheduled). Required of course 25. Exploration of main trends that characterize contemporary Latin American and Spanish literatures and cultures and main concepts used to address them. Possible topics include trans-cultural and heterogeneous, race and ethnicity, Vanguard movements, lettered and popular cultures, literary modernization in Latin American boom, literature and revolution, autobiography, women’s writing, border literature, and postmodernist fiction. May be repeated for credit with topic change. P/NP or letter grading.

155A. Chicano Narrative. (4) (Same as Chicana and Chicano Studies M155A.) Lecture, three hours. Enforced requisite: course 25 or 27. Introduction to major Chicano narrative movement through literature, autobiography, cronica/sentiblanca, Chicana detective novel, and Chicana solidarity fiction. Texts examined within their own geographic, cultural, and historical contexts, as well as within history of narrative forms. P/NP or letter grading.

155B. Literature of Chicana/Chicano Movement. (4) (Same as Chicana and Chicano Studies M155B) Lecture, three hours. Enforced requisite: course 25 or 27. Introduction to major Chicano narrative movement through literature, autobiography, cronica/sentiblanca, Chicana detective novel, and Chicana solidarity fiction. Texts examined within their own geographic, cultural, and historical contexts, as well as within history of narrative forms. P/NP or letter grading.

155C. Topics in U.S. Latino Studies. (4) Lecture, four hours. Enforced requisite: course 25 or 27. Exploration of spread of Spanish-American literature and culture throughout North America, including literatures that are outgrowth of civil rights movements of 1950s, recent demographic shift of Chicano population, new transnational identities, and mixed citizenships of U.S. Latinos and Latinos, Chicano, Puerto Rican, Cuban American, Central American American, South American American, and Jewish Latino literatures may be included. May be repeated for credit with topic change. P/NP or letter grading.

160. Topics in Spanish Linguistics. (4) Lecture, four hours. Enforced requisite: course 25. Exploration of origin of language, how Spanish is acquired, evolution of Spanish from Latin to early modern period, how Spanish varies in world, how to teach Spanish, Spanish contact with other languages. Possible topics include Spanish in Los Angeles, history of Spanish language, first- and second-language acquisition, language and cognition. May be repeated for credit with topic change. P/NP or letter grading.

M165SL. Taking It to Street: Spanish in Community. (5) (Same as Chicana and Chicano Studies M165SL) Seminar, three hours; fieldwork, 10 hours. Enforced requisite: course 25 or 27. Service learning course. guest speakers or instructors include professional literary translators, poets, novelists, playwrights, and filmmakers who discuss theory, methodology, and practice of their art. May be repeated for credit with topic change. P/NP or letter grading.

M172SL. Latinos, Linguistics, and Literacy. (5) (Same as Chicana and Chicano Studies M172SL) Seminar, four hours; field project, four to six hours. Recommended requisite: course 100A. In-depth study of various topics related to literacy, including different definitions of literacy, programs for adult pre-literate, literacy and gender, approaches to literacy (whole language, phonics, Freire's liberation pedagogy), history of writing systems, phoneme as basis for alphabetic writing, and national literacy campaigns. Required field project involving Spanish-speaking adults in adult literacy programs. P/NP or letter grading.

175. Topics in Creative Writing and Translation. (4) Seminar, three hours. Required: course 25. Exploration of art of translation or creative writing. Guest speakers or instructors include professional literary translators, poets, novelists, playwrights, and filmmakers who discuss theory, methodology, and practice of their art. May be repeated for credit with topic change. P/NP or letter grading.

187A-187B. Advanced Tutorial in Community and Culture I, II. (1-2) Tutorial, one hour. Required of course 25 or 27. Enforced requisite: course 25 or 27. Designed as adjunct to upper-division course in Hispanic literature, language, and culture. Exploration of topics in greater depth through supplemental readings, papers, community service, or other activities. Course 187A may be repeated once for credit. P/NP or letter grading.

191A. Variable Topics in Spanish: Studies in Hispanic Literature and Culture I. Same as 187A. 187B. Three hours. Limited to 15 junior/senior Spanish majors. Variable topics course with readings, discussions, and development of culminating paper. Consult Schedule of Classes or department counselor for topic to be offered in specific term. P/NP or letter grading.

191B. Variable Topics in Spanish: Studies in Hispanic Culture and Civilization. (3) Seminar, three hours. Advanced variable topics course that studies diverse aspects of Hispanic culture, civilization, and
history. Classroom discussions, development of culminating papers, and examinations in Spanish. P/NP or letter grading.

191C. Senior Capstone Seminar. (4) Seminar, three hours. Enforced requisites: courses 119, 120, and at least three upper-division elective courses required for majors. Limited to senior Spanish majors. Knowledge from previous coursework used to address current trends in discipline; students work with one faculty member on one focused research topic. Culminating paper required. Letter grading.

195. Community Internships in Spanish. (4) Tutorial, one hour; fieldwork, 10 hours. Requisite: course 25 or 27. Limited to juniors/seniors. Internship in supervised setting in community agency or business. Students meet on regular basis with instructor and provide journal of their experience. Final research paper required. May be repeated for credit. Individual contract with supervising faculty member required. P/NP or letter grading.

197. Individual Studies in Spanish. (2 to 4) Tutorial, to be arranged. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. Eight units of courses 197 and/or 199 may be applied toward major requirements. Each course is limited to a maximum of 8 units. Individual contract required. P/NP or letter grading.

198A-198B. Senior Honors Research in Spanish I, II. (4-2) Tutorial, to be arranged. Preparation: completion of minimum of six upper-division major core courses with 3.7 grade-point average. Course 198A is enforced requisite to 198B. Limited to juniors/seniors. Development and completion of honors thesis under direct supervision of faculty member. May not be applied toward major requirements. Individual contract required. Letter grading.

199. Directed Research in Spanish. (2 to 4) Tutorial, to be arranged. Requisite: course 25. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Culminating paper required. Eight units of courses 197 and/or 199 may be applied toward major requirements. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

M200. Research Resources. (4) (Same as Portuguese M200.) Lecture, three hours. Identification and use of resources for graduate students.

M201A-M201B. Literary Theory and Criticism. (4-4) (Same as Portuguese M201A-M201B.) Lecture, three hours. Definition, discussion, and application of major currents of contemporary literary theory and criticism. Letter grading.

202A. Phonology. (4) Lecture, three hours. Study of the sound structure of Spanish and main phonological processes that map underlying representations into surface representations. Bearing of phonological theory on study of meter.

202B. Morphology. (4) Lecture, three hours. Study of derivational and inflectional word formation processes and their interaction with syntactic structure.

204A-204B. Generative Syntax and Semantics. (4-4) Lecture, three hours. Study of syntactic structure of Spanish and relation between underlying representations and logical form within a principles-and-parameters framework. Bearing of syntactic and semantic structure on study of literature.

M205A-M205B. Development of Portuguese and Spanish Languages. (4-4) (Same as Portuguese M205A-M205B.) Lecture, three hours. Intensive study of history of Portuguese and Spanish languages from their origin in spoken Latin.

209. Dialectology. (4) Lecture, three hours. Major dialect areas of peninsular and American Spanish, with distinguishing features of each. Influence and contributions of historical and geographical features, including indigenous languages, to their formation.

221. Medieval Lyric Poetry. (4) Lecture, three hours. Readings of and lectures on Spanish lyric poetry from the beginning to 1500.

222. Medieval Epic and Narrative Poetry. (4) Lecture, three hours. Readings of and lectures on Spanish epic and narrative poetry from the beginning to 1500.

223. Medieval Prose. (4) Lecture, three hours. Readings of and lectures on Spanish prose from the beginning to 1500.

224. Poetry of the Golden Age. (4) Lecture, three hours. Readings of and lectures on poetry of the Golden Age from 1500 to 1700.

225. Drama of the Golden Age. (4) Lecture, three hours. Readings of and lectures on the comedies.


228. The Enlightenment. (4) Lecture, three hours. Readings of and lectures on representative works of the period.

229. Romanticism. (4) Lecture, three hours. Readings of and lectures on representative works of the period.

230. Realism and Naturalism. (4) Lecture, three hours. Readings of and lectures on literary works, principally novels, from 1850 to 1898.

231. Major Currents in Modern Spanish Literature. (4) Lecture, three hours. Introduction to major literary currents, including symbolism, Parnassianism, and the Generation of 1898.

232. Spanish Prose Literature from 1898 to the Civil War. (4) Lecture, three hours. Readings of and lectures on representative essays, novels, and short stories of the period.

233. Spanish Prose Literature after the Civil War. (4) Lecture, three hours. Readings of and lectures on representative essays, novels, and short stories of the period.

234. Spanish Drama and Poetry from 1898 to the Civil War. (4) Lecture, three hours. Readings of and lectures on representative plays and poems.

235. Spanish Drama and Poetry after the Civil War. (4) Lecture, three hours. Readings of and lectures on representative plays and poems of the period.

237. Literature of the Spanish Conquest. (4) Lecture, three hours. Readings of and lectures on chronicles, poems, and indigenous accounts of the Spanish Conquest.


241A-241B. Contemporary Spanish-American Short Story. (4-4) Lecture, three hours. Study of important short story writers from modernism to the present.

243A-243B. Contemporary Spanish-American Poetry. (4-4) Lecture, three hours. Intensive study of important poets of Spanish America from modernism to the present.

244A-244B. Contemporary Spanish-American Novel. (4-4) Lecture, three hours. Study of important Spanish-American novelists from modernism to the present.


M247. Chicano Literature. (4) (Formerly numbered 247.) (Same as Chicana and Chicano Studies M247.) Lecture, three hours. Study of major movements and authors of Mexican American literature. S/U or letter grading.

M249. Folk Literature of Spanish and Portuguese Worlds. (4) (Same as Portuguese M249.) Lecture, three hours. Intensive study of folk literature of Spanish and Portuguese cultures as represented in (1) ballad and poetry, (2) narrative and drama, (3) speech and narrative literature.

M251A-M251B. Studies in Gallego-Portuguese and Old Spanish. (4-4) (Same as Portuguese M251A-M251B.) Lecture, two hours. Study of problems related to history of Gallego-Portuguese and Old Spanish. Each course may be repeated once with topic change and consent of appropriate guidance committee.

256A-256B. Studies in Spanish Linguistics. (4-4) Discussion, two hours. May be repeated once with topic change and consent of appropriate guidance committee.

257. Studies in Dialectology. (4) Discussion, two hours. May be repeated once with topic change and consent of appropriate guidance committee.

262A-262B. Studies in Medieval Spanish Literature. (4-4) Discussion, two hours. Each course may be repeated once with topic change and consent of appropriate guidance committee.

264A-264B. Studies in Golden Age Spanish Literature. (4-4) Discussion, two hours. Each course may be repeated once with topic change and consent of appropriate guidance committee.

265. Cervantes. (4) Discussion, two hours. May be repeated once with topic change and consent of appropriate guidance committee.

270A-270B. Studies in 18th-Century Spanish Literature. (4-4) Discussion, two hours. Each course may be repeated once with topic change and consent of appropriate guidance committee.

271A-271B. Studies in 19th-Century Spanish Literature. (4-4) Discussion, two hours. Each course may be repeated once with topic change and consent of appropriate guidance committee.

272A-272B. Studies in 20th-Century Spanish Literature. (4-4) Discussion, two hours. Each course may be repeated once with topic change and consent of appropriate guidance committee.

277A-277B. Studies in Colonial Spanish-American Literature. (4-4) Discussion, two hours. Each course may be repeated once with topic change and consent of appropriate guidance committee.

280A-280B. Studies in Contemporary Spanish-American Literature. (4-4) Discussion, two hours. Each course may be repeated once with topic change and consent of appropriate guidance committee.

281. Studies in Chicano Literature. (4) Discussion, two hours. May be repeated once with topic change and consent of appropriate guidance committee.

296A-296B. Studies in Hispanic Folk Literature. (4-4) Lecture, two hours. Each course may be repeated once with topic change and consent of appropriate guidance committee. S/U or letter grading.

298. Special Topics. (4) Lecture, two hours. Variable topics; consult Schedule of Classes or department counselor for topics to be offered in a specific term. May be repeated once with topic change and consent of appropriate guidance committee.

299A-299B. Colonial Studies Research Group. (2-2) Research group meeting, two hours. Limited to graduate students. Discussion and analysis of colonial manuscripts. Specific topics vary from year to year. Production of student papers for publication and/or presentation at conferences or symposia.

299A or 299B. Required course; course 291A. May be repeated for credit. S/U or letter grading.
396. Graduate Research Group. (2) Research group meeting, two hours. Limited to graduate students. Designed to bring together graduate students in seminar setting with one or more faculty members to discuss and critique individual research projects, especially dissertation research. S/U grading.

310. Teaching Spanish in Elementary School. (4) Lecture, three hours.


373. Teaching Composition. (2) Designed for graduate students. Seminar on teaching writing in Spanish language courses. Introduction to composition theory. Instruction and practice in integrating writing into curriculum, setting goals and standards, designing and sequencing course materials, evaluating and commenting on papers. May not be repeated for credit. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

490. Using Technology in Foreign Language Classroom. (4) Discussion, two hours. Designed for graduate students. Theory and practice of using technology in foreign language classroom. Computer applications that facilitate instruction of grammar, discourse, culture, and composition, as well as evaluation and communication between students and instructor. S/U grading.


596. Directed Individual Study or Research. (4 or 8) Tutorial, to be arranged. Study or research in areas or subjects not offered as regular courses. No more than 4 units may be applied toward MA course requirements. S/U or letter grading.

597. Preparation for Graduate Examinations. (4 to 12) Tutorial, to be arranged. Preparation: official acceptance of candidacy by department. Individual preparation for MA comprehensive examination or PhD qualifying examinations. May be taken only once for each degree examination and only in term that comprehensive or qualifying examinations are to be taken. S/U grading.


Professors
Peter M. Bentler, PhD
Susan D. Cochran, PhD
Dorota M. Babowleska, PhD
Rebecca J. Emigh, PhD
Mark S. Handcock, PhD
Edward E. Leamer, PhD (Chauncey J. Medberry Professor of Management)
Ker-Chau Li, PhD
Kevin F. McCardle, PhD
Frederic R. Paik Schoenberg, PhD
Theodore M. Porter, PhD
Janice L. Reff, PhD (Waldo W. Neikirk Term Professor)
David L. Rigby, PhD
Yingnian Wu, PhD
Hongqian Xu, PhD
Qing Zhou, PhD
Song-Chun Zhu, PhD

Professors Emeriti
Richard A. Berk, PhD
Jan de Leeuw, PhD

Associate Professor
Hongjting Lu, PhD

Assistant Professors
Arahan A. Amini, PhD
Alyson K. Fletcher, PhD
Erik K. Hartman, PhD
Chad J. Hazlett, PhD
Jingyi Jessica Li, PhD

Lecturer SOE
Robert L. Gould, PhD

Senior Lecturers
Nicolas Christou, PhD
Maryam M. Esfandiari, PhD
Vivian Lew, PhD
Juana Sanchez, PhD

Lecturers
Akrum M. Almohalwas, PhD
Maria Cha, PhD
Miles S. Chen, PhD
Michael Tsang, PhD
Linda A. Zanontian, PhD

Adjunct Associate Professor
Ivaylo D. Dinov, PhD

Adjunct Assistant Professor
Katherine M. Mullen, PhD

Scope and Objectives
With the advent of fast computing and the subsequent flood of data detailing almost every aspect of our daily lives comes an urgent need for scientists trained in modern statistical methodologies.

Both the undergraduate and graduate programs in the Department of Statistics are structured around three core course sequences that introduce students to the science of data: theoretical statistics, data analysis, and statistical computing. This balance reflects the scale and complexity of problems that statisticians are now routinely called to address. Additional course offerings reflect the work of faculty members in bioinformatics, sensor networks, environmental studies, finance, and computer vision.

Courses and workshops for secondary school teachers of statistics are also offered in order to promote sound statistics pedagogy throughout the curriculum.

Reflecting diverse research interests, the department is organized around several centers that collectively provide undergraduate and graduate students rich opportunities for specialized study. These include the Center for Environmental Statistics, Center for Image and Vision Sciences, Center for Statistical Computing, Center for Statistical Research in Computational Biology, and Center for the Teaching of Statistics.

Undergraduate Study
The Statistics major is a designated capstone major. Undergraduate students work in small groups to solve problems posed by real community-based or campus-based clients. The capstone gives students an opportunity to put into practice concepts and ideas that otherwise might remain theoretical and/or abstract and to synthesize the many topics they have studied. Students should demonstrate ability to restate investigative questions in terms of statistical models or algorithms, find appropriate research literature to support their work, relate theoretical concepts to real-world problems, and clearly communicate their results to nontechnical audiences.

Undergraduate Courses
Students planning to pursue advanced degrees in statistics should enroll in the Statistics 100 sequence. Most courses are offered once or twice each year; students interested in either the major or minor in Statistics should meet with the student affairs officer early in their careers.

Statistics BS Capstone Major
The Statistics major is designed to provide a general introduction to the practice of statistics for students who intend to pursue study at the graduate level or seek employment in industry or government. Courses are selected to provide sufficient theoretical background for future graduate-level research work, exposure to modern techniques and practices, and experience in fields of application.

It is strongly recommended that students, in conjunction with the BS degree, pursue a minor in a substantive discipline that applies statistics. Students must consult with the undergraduate faculty adviser to ensure that the minor selected is one in which statistics is applied.

Statistics Premajor
Incoming freshman and transfer students may be admitted as Statistics premajors on acceptance to UCLA. Premajor students must apply for the major after completing Mathematics 33A, Statistics 20, and one course from Statistics 10 through 13, with grades of C or better, and a grade-point average of 2.5. Any student who meets the premajor requirements may declare the major with the undergraduate adviser in 8117A Mathematical Sciences, 310-206-3742.

Preparation for the Major
Required: Mathematics 31A, 31B, 32A, 32B, 33A, Statistics 20, and one course from Statistics 10 through 13. Each course must be completed with a grade of C or better. Students
who repeat any preparation course more than once are automatically denied admission to the major.

**Transfer Students**
Transfer applicants to the Statistics major with 90 or more units must complete as many of the following introductory courses as possible prior to admission: two years of calculus, one linear algebra course, and one statistics course.

Refer to the [UCLA Transfer Admission Guide](#) for up-to-date information regarding transfer selection for admission.

**The Major**

**Required: Statistics 100A, 100B, 100C, 101A, 101B, 101C, 102A, 102B, 102C, two capstone statistical consulting courses (140SL, 141SL), and two upper-division elective courses selected from 130, 131I through 199, Mathematics 131A, 131B, 151A, 151B, 170B, 171, 172B, 175. Elective courses from outside the department are selected in consultation with the undergraduate faculty adviser.**

The capstone consists of two courses (Statistics 140SL and 141SL) that must be completed sequentially in the final year. Students must first take courses 100B, 101B, and 130 before they can begin the capstone.

Only 4 units of course 199 may be applied toward the major. Courses 189 and 189HC may not be applied toward any of the major requirements.

Students planning to continue their study of statistics at the graduate level are strongly advised to include in their schedule as many of the following courses as possible: Mathematics 131A, 131B, 151A, 151B, 170B, 171.

Each major course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better.

**Statistics Minor**

The Statistics minor is designed to provide a solid background in statistics for students majoring in other disciplines.

To enter the minor, students (1) must be in good academic standing (2.0 grade-point average or better) and have taken Mathematics 31B, Statistics 20, and one course from Statistics 10 through 13 for letter grades and (2) file a petition with the undergraduate adviser in 8117A Mathematical Sciences, 310-206-3742.

**Required Upper-Division Courses (28 units):**
Seven upper-division courses selected from one of the following options: (1) any two sequences from Statistics 100A, 100B, 100C, and 101A, 101B, 101C, and 102A, 102B, 102C, and one elective course or (2) two courses from each of the above sequences and one elective course. Electives may be selected from any upper-division statistics course. Statistics 199 may be applied as one of the electives for both options. Courses 105 and 189 may not be applied toward the minor.

A minimum of 20 units applied toward the major requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

**Graduate Degrees**

The Department of Statistics offers Master of Science (MS), Candidate in Philosophy (CPh), and Doctor of Philosophy (PhD) degrees in Statistics; and a self-supporting Master of Applied Statistics (MAS) degree.

**Statistics**

**Lower-Division Courses**

10. Introduction to Statistical Reasoning. (5)

Lecture, three hours; discussion, one hour; computer laboratory, two hours. Preparation: three years of high school mathematics. Not open for credit to students with credit for course 11, 12, 13, 14, or former course 10H. Introduction to statistical thinking and understanding, including strengths and limitations of basic experimental design, graphical and numerical summaries of data, inference, regression as descriptive tool. P/NP or letter grading.

12. Introduction to Statistical Methods for Geographical and Environmental Studies. (5)

Lecture, four hours; discussion, one hour; laboratory, one hour. Not open for credit to students with credit for course 10, 11, 13, 14, or former course 10H. Introduction to statistical thinking and understanding, with emphasis on techniques used in geography and environmental science. Underlying logic behind statistical procedures, role of variation in statistical thinking, strengths and limitations of statistical summaries, and fundamental inferential tools. Emphasis on applications in geography and environmental science in laboratory work using professional statistical analysis package, including spatial statistics. P/NP or letter grading.

13. Introduction to Statistical Methods for Life and Health Sciences. (5)

Lecture, three hours; discussion, one hour; laboratory, one hour. Not open for credit to students with credit for course 10, 10H, 11, 12, or 14. Presentation and interpretation of data, descriptive statistics, introduction to correlation and regression and to basic statistical inference (estimation, testing of means and proportions, ANOVA) using both bootstrap methods and parametric models. P/NP or letter grading.

20. Introduction to Statistical Programming with R. (4)

Lecture, three hours; discussion, one hour. Enforced requisite: course 10, 12, or 13. Designed to prepare students for capstone work in statistics. Introduction to use of R, including data management, simple programming, and statistical graphics in R. P/NP or letter grading.

35. Introduction to Probability with Applications to Poker. (4)

Lecture, three hours; discussion, one hour. Exploration of some main topics in introductory probability theory, especially discrete probability problems, that are useful in wide variety of scientific applications. Topics include conditional probability and conditional expectation, combinatorics, laws of large numbers, central limit theorem, Bayes theorem, univariate distributions, Markov processes, and Brownian motion. Examination of computer simulation in depth and discussion of computational approximations of solutions to complex problems using R, with examples of situations and concepts that arise naturally when playing Texas Hold’em and other games. P/NP or letter grading.

88. Sophomore Seminars: Statistics. (2)
Seminar, two hours. Requisite: one course from 10, 11, 12, 13, or 14. Limited to 20 lower-division students. Readings and discussions designed to introduce students to current statistical consulting research and fieldwork disciplines. Culminating project may be required. P/NP or letter grading.

**Upper-Division Courses**

100A. Introduction to Probability. (4)
Lecture, three hours; discussion, one hour. Requisites: Mathematics 32B, 33A. Not open to students with credit for Electrical Engineering 131A or Mathematics 170A; open to graduate students. Students may receive credit for only two of following: course 100A, former course 110A, Biostatistics 100A. Probability distributions, random variables, vectors, and expectation. P/NP or letter grading.

100B. Introduction to Mathematical Statistics. (4)
Lecture, three hours; discussion, one hour. Requisite: course 100A or Mathematics 170A. Survey sampling, estimation, testing, data summary, one- and two-sample problems. P/NP or letter grading.

100C. Linear Models. (4)
Lecture, three hours; discussion, one hour. Requisite: course 100B. Theory of linear models, with emphasis on matrix approach to linear regression. Topics include model fitting, extra sums of squares principle, testing general linear hypothesis in regression, inference procedures, Gauss-Markov theorem, examination of residuals, principle component regression, stepwise procedures. P/NP or letter grading.

101A. Introduction to Data Analysis and Regression. (4)
Lecture, three hours; discussion, one hour. Requisites: courses 10 or 12 or 13, and 20. Recommended: course 102A. Applied regression analysis, with emphasis on general linear model (e.g., multiple regression) and generalized linear model (e.g., logistic regression). Special attention to modern extensions of regression, including regression diagnostics, graphical procedures, and bootstrapping for statistical influence. P/NP or letter grading.

101B. Introduction to Design and Analysis of Experiment. (4)
Lecture, three hours; discussion, one hour. Requisite: course 101A. Fundamentals of collecting data, including components of experiments, randomization and blocking, completely randomized design and ANOVA, multiple comparisons, power and sample size, and block designs. P/NP or letter grading.

101C. Introduction to Statistical Models and Data Mining. (4)
Lecture, three hours; discussion, one hour. Enforced requisite: course 101B. Designed for juniors/seniors. Applied regression analysis, with emphasis on general linear model (e.g., multiple regression) and generalized linear model (e.g., logistic regression). Special attention to modern extensions of regression, including regression diagnostics, graphical procedures, and bootstrapping for statistical influence. P/NP or letter grading.

102A. Introduction to Computational Statistics with R. (4)
Lecture, three hours; discussion, one hour. Requisites: courses 10, 20, Mathematics 33A. Introduction to computational statistics through numerical methods and computationally intensive methods for statistical problems. Topics include statistical graphics, root finding, simulation, randomization testing, and bootstrapping. Covers intermediate to advanced programming with R. P/NP or letter grading.

102B. Introduction to Computation and Optimization for Statistics. (4)
Lecture, three hours; discussion, one hour. Requisites: courses 20, 100B, Mathematics 33A. Introduction to computational methods and optimization useful for statistics. Use of computer programming to solve statistical problems. Topics include vector/matrix computation, multivar-


C116. Social Statistics. (4) Lecture, three hours. Preparation: some knowledge of basic calculus and linear algebra. Requisites: courses 100A and 100B, or 101B and one course from 10, 11, 12, 13, or 101D. One-and-two upper-division statistics course using regression. Designed for social sciences graduate students and advanced undergraduate students seeking training in data issues and methods employed in social sciences. Concurrently scheduled with course C216. P/NP or letter grading.

130. Getting Up to Speed with SPSS, Stata, SAS, and R. (4) Lecture, three hours; discussion, one hour. Preparation: basic computer literacy. Study of four commonly employed solutions—SPSS (Statistical Package for Social Sciences), Stata, SAS (Statistical Analysis System), and R—for data analytic and statistical sciences, engineering, economics, and government. Emphasis on applied problem solving, measurement issues in data analysis, use of computer for analysis of large-scale data. P/NP or letter grading.

140SL. Practice of Statistical Consulting. (4) Lecture, one hour; discussion, two hours. Enforced requisites: courses 100B, 101B, 130. Limited to seniors. Opportunity to solve real data analysis problems for real community-based or campus-based clients. Students work in small groups with faculty member and client to frame client's question in statistical terms, create statistical model, analyze data, and report results. Weekly meetings in classroom setting to study basic consulting skills, share experiences, exchange ideas, and make reports. On-site visits as necessary. Courses 140SL and 141SL must be taken in consecutive terms. In Progress grading (credit to be given only on completion of course 141SL).

141SL. Practice of Statistical Consulting. (4) Seminar, one hour; research group meeting, two hours. Enforced requisites: 140SL. Limited to seniors. Opportunity to solve real data analysis problems for real community-based or campus-based clients. Students work in small groups with faculty member and client to frame client's question in statistical terms, create statistical model, analyze data, and report results. Weekly meetings in classroom setting to study basic consulting skills, share experiences, exchange ideas, and make reports. On-site visits as necessary. Courses 140SL and 141SL must be taken in consecutive terms. Letter grading.


M154. Measurement and Its Applications. (4) (Same as Psychology M144.) Lecture, three hours. Requisite: one course from 10, 11, 12, 13, 14, or Psychology 100A. Selected theories for quantification of psychological, educational, social, and behavioral science data. Classical test, factor analysis, generalizability, item response, optimal scaling, ordinal measurement, computer-adaptive, and related theories. Construction of tests and measures and their reliability, validity, and bias. P/NP or letter grading.

C155. Applied Sampling. (4) Lecture, three hours; discussion, one hour. Requisite: two upper-division and graduate students in social or life sciences and those who plan to major in Statistics. Topics include methods of sampling from finite populations, sources of sampling and estimation bias, and methods of generating efficient and precise estimates of population characteristics. Practical applications of sampling methods via lectures and hands-on laboratory exercises. Concurrently scheduled with course C248. P/NP or letter grading.


C162. Theoretical Statistics. (4) Lecture, three hours; discussion, one hour. Requisite: course 100C (may be taken concurrently) or 101B. Geostatistics can be applied to many problems in other disciplines such as hydrology, traffic, air and water pollution, epidemiology, economics, geography, waste management, forestry, oceanography, meteorology, and agriculture, and, in general, to every problem where data are observed at geographic locations. Acquisition of knowledge and skills from different fields to be used to analyze real spatial data problems and to connect geostatistics with geographic information systems (GIS). Concurrently scheduled with course C273. P/NP or letter grading.

175. Statistics for Spatial Data. (4) Lecture, three hours; discussion, one hour. Statistical theories used in analyzing spatial data. Study of three types of spatial data: geostatistical data, lattice data, and point patterns, with emphasis on applications and analysis of spatial data using open-source statistical software R. P/NP or letter grading.

C180. Introduction to Bayesian Statistics. (4) Lecture, three hours; discussion, one hour. Enforced requisites: course 100B, Mathematics 32B. Designed for juniors/seniors. Introduction to statistical inference based on use of Bayes theorem, covering foundations of probability, current applications, and potential areas of future development. Topics include Stein paradox, nonparametric Bayes, and statistical learning. Examples of applications vary according to interests of students. Concurrently scheduled with course C236. P/NP or letter grading.

182. Fundamentals of Scientific Writing. (2) Seminar, one hour. Development and perfection of student written communication skills through variety of scientific writing and reading assignments. Objectives and techniques of scientific writing and practice with different forms of professional writing. Analysis of quality of writing, including control, clarity, grammar, and mechanics. P/NP or letter grading.


186. Careers in Statistics. (1) Seminar, one hour. Discussion of applications of statistics by weekly guest speakers. How statistics is applied to legal questions, economic decisions, arts, environment, and other fields, with some emphasis on career paths in statistics. P/NP grading.

191. Career or Company Internships in Statistics. (4) Tutorial, four hours. Limited to juniors/seniors. Internship in supervised setting in community agency or business, Students meet on regular basis with instructor and provide periodic reports of their experience. May be repeated for credit. Individual contract with supervising faculty member required. P/NP or letter grading.

199. Directed Research in Statistics. (1 to 4) Tutorial, one hour. Limited to supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200A. Applied Probability. (4) Lecture, three hours; discussion, one hour. Requisite: course 100A or Mathematics 170A. Limited to graduate statistics students. Stochastic Processes, renewal theory and selected topics from queuing, reliability, speech recognition, computational biology, mathematical finance, epidemiology, S/U or letter grading.

200B. Theoretical Statistics. (4) Lecture, three hours; discussion, one hour. Topics for advanced probability, exponential families, least squares, maximum likelihood estimation, Bayesian estimation, Fisher information, Cramer/
Rao inequality, Stein’s estimate, empirical Bayes, shrinkage and penalty, confidence intervals. Likelihood ratio test, p-value, false discovery, nonparametrics, semi-parametrics, model selection, dimension reduction. S/U or letter grading.

200C. High Dimensional Probabilities. (4) Lecture, three hours; discussion, one hour. Survey of modern techniques in analyzing high-dimensional and non-parametric estimation problems. Emphasis on non-asymptotic bounds via concentration inequalities. S/U or letter grading.

201A. Research Design, Sampling, and Analysis. (4) Lecture, three hours. Designed for graduate students. Basic principles, ANOVA block designs, factorial designs, unequal probability sampling, regression estimation, stratified sampling, and cluster sampling. S/U or letter grading.

201B. Statistical Modeling and Learning. (4) Lecture, three hours; discussion, one hour. Requisites: courses 202A, 201A. Methods of model fitting and parameter estimation, with emphasis on regression and classification techniques, including those from machine learning. Interest in either obtaining suitable conditions for estimation, test or estimating meaningful parameters of underlying probabilistic model to make inferences or predictions from data. Focus on what is to be done when linear models are not appropriate. Topics include: regression, classification and unsupervised learning. S/U or letter grading.

201C. Sequential and Inference. (4) Lecture, three hours; discussion, one hour. Strongly recommended requisites: courses 200B, 201B. Designed for graduate students. Introduction to advanced topics in statistical modeling and inference, including Bayesian hierarchical models, missing data problems, mixture modeling, additive modeling, hidden Markov models, and Bayesian networks. Coverage of computational methods used and developed for these models and problems, such as EM algorithm, data augmentation, dynamic programming, and belief propagation. S/U or letter grading.

202A. Statistics Programming. (4) Lecture, three hours; discussion, one hour. Topics include programming environments/languages such as UNIX, UNIX shell, Python, R, and Processing and data technologies/formats such as relational databases/SQL and XML, statistical packages, complex data types, large collections of textual data, GPS traces, network logs, and various online sources. S/U or letter grading.

202B. Matrix Algebra and Optimization. (4) Lecture, three hours; discussion, one hour. Recommended requisite: course 202A. Survey of computational methods that are especially useful for statistical analysis, with implementations in statistical package R. Topics include matrix algebra, multivariate regression, principal component analysis, multivariate analysis, and deterministic optimization methods. S/U or letter grading.

202C. Monte Carlo Methods for Optimization. (4) Lecture, three hours; discussion, one hour. Requisite: course 202B. Monte Carlo methods and numerical integration, Importance and rejection sampling. Sequential Monte Carlo (SMC) sampling techniques, with emphasis on Gibbs samplers and Metropolis/Hastings. Simulated annealing. Exact sampling with coupling from past, Stationarity testing and bootstrap confidence intervals. S/U or letter grading.


204. Nonparametric Function Estimation and Modeling. (4) Lecture, three hours. Requisite: course 200A. Introduction to many useful nonparametric techniques such as nonparametric density estimation, nonparametric regression, and high-dimensional statistical models and methods for analysis of data. Letter grading.

205. Hierarchical Linear Models. (4) Lecture, three hours. Designed for students in statistics and other disciplines who want to perform data analysis using linear and nonlinear regression and multilevel models. Introduction to and demonstration of wide variety of models to instruct students in how to fit these models using three and R packages. Topics include regression, poststratification, matching, regression discontinuity, and instrumental variables, as well as multilevel logistic regression and missing-data imputation. Practical tips regarding building, fitting, and understanding models provided. S/U or letter grading.


212. Social Statistics. (4) Lecture, three hours. Preparation: knowledge of multivariate calculus and linear algebra. Requisites: courses 100A and 100B, or 101B and 101C, or one course from 10, 11, 12, 13 and one upper-division statistics course using regression models. Students will be introduced to sampling procedures and advanced undergraduate students seeking training in data issues and methods employed in social sciences. Concurrently scheduled with course C116. S/U or letter grading.

218. Statistical Analysis of Networks. (4) Lecture, three hours. Limited to graduate students. Introduction to analysis of social structure, conceived in terms of social relationships. Major concepts of social network analysis and its application to social and psychological concepts such as role and position. Use of graph-theoretical representations of network information. S/U or letter grading.


231. Pattern Recognition and Machine Learning. (4) Same as Computer Science M278A. Lecture, four hours. Requisites: courses 100C, and Mathematics 115A. Introduction to pattern recognition and machine learning that are used in computer vision, speech recognition, data mining, statistics, and computational biology. Topics include Bayesian decision theory, parametric and nonparametric learning, clustering, complexity (VC-dimension, MLD, AIC), PCA/ICA/TCA, MDS, SVM, boosting. S/U or letter grading.


M232B. Statistical Computing and Inference in Vision and Cognition. (4) Same as Computer Science M268B. Lecture, three hours. Preparation: basic statistics, linear algebra (matrix analysis), computer vision. Introduction to broad range of algorithms for statistical inference and learning that could be used in vision, pattern recognition, speech, bioinformatics, data mining. Topics include Markov chain Monte Carlo computing, sequential Monte Carlo methods, belief propagation, partial differential equations. S/U or letter grading.

C236. Introduction to Bayesian Statistics. (4) Lecture, four hours. Concurrently scheduled with course C180. S/U or letter grading. Recommended requisite: course 200A or 200B. Designed for graduate students. Introduction to statistical inference based on use of Bayes theorem, covering foundational aspects, current computational approaches and computational topics. Topics include Stein paradox, nonparametric Bayes, and statistical learning. Examples of applications vary according to interests of students. Concurrently scheduled with course C180. S/U or letter grading.

C238. Vision as Bayesian Inference. (4) Lecture, three hours. Requisite: course 200A or 200A. Formulation of vision as Bayesian inference using models developed for designing artificial vision systems. Applied to statistics, they define ideal observer models that can be used to model human performance and serve as a benchmark. S/U or letter grading.


M242. Multivariate Analysis with Latent Variables. (4) Same as Political Science /Psychology M257. Lecture, three hours. Introduction to models and methods for analysis of data hypothesized to be generated by unmeasured latent variables, including latent variable analogues of traditional methods in multivariate analysis. Causal modeling: theory testing via analysis of moment structures. Measurement models such as confirmatory factor analysis, hypothesized and structural equation factory analytic models. Structural equation models, including path and simultaneous equation models. Parameter estimation, hypothesis testing, and other statistical issues. Computer implementation. Applications. S/U or letter grading.

M243. Logic, Causation, and Probability. (4) Same as Epidemiology M204.) Lecture, four hours. Preparation: two terms of statistics or probability and statistics. Recommended requisite: Epidemiology 200C.

M244. Statistical Analysis with Latent Variables. (4) (Same as Psychology M221E) Lecture, four hours. Requisites: Education 231A, M231B. Extends path analysis (causal modeling) by considering models with measurement errors and multiple indicators of latent variables. Confirmatory factor analysis, covariance structure modeling, and multiple-group analysis. Identification, estimation, testing, and model building considerations. Letter grading.


246. Statistical Model Selection. (4) Lecture, three hours. Preparation: basic knowledge of calculus, linear algebra, and computer programming. Modern methods for constructing and evaluating statistical models, including non-Bayesian and Bayesian statistical modeling approaches. Discussion of theoretical parts and data analysis. Letter grading.

CM248. Advanced Research Methods in Genetics. (Same as Epidemiology M216) Lecture, three hours; discussion, one hour. Designed for upper-division and graduate students in social or life sciences and those who plan to major in Statistics. Topics include methods of sampling from finite populations, sources of sampling and estimation bias, and methods of generating efficient and precise estimates of population characteristics. Practical role of sampling methods in analyzing our future and hands-on laboratory exercises. Concurrently scheduled with course C15S. S/U or letter grading.

M250. Statistical Methods in Epidemiology. (4) (Same as Epidemiology M211) Lecture, four hours. Preparation: two terms of statistics (such as Biostatistics 100A, 100B). Enforced requisites: Epidemiology 200B, 200C. Concepts and methods tailored for analysis of epidemiologic data. Emphasis on tabular and graphical techniques. Expansion of topics introduced in Epidemiology 200B and 200C and introduction of new topics, including principles of epidemiologic analysis; smoothing and enhancing sensitivity analysis. S/U or letter grading.

M254. Statistical Methods in Computational Biology. (4) (Same as Bioinformatics M271 and Biostatistics M271) Lecture, three hours; discussion, one hour. Preparation: elementary probability concepts. Requisite: course 100A or 200A or Bioinformatics M260A. Introduction to statistical methods developed and widely applied in several branches of computational biology, such as gene expression, sequence alignment, motif discovery, comparative genomics, and biological networks, with emphasis on understanding of basic statistical concepts and use of statistical inference to solve biological problems. Letter grading.

C261. Introduction to Pattern Recognition and Machine Learning. (4) Lecture, three hours. Requisites: course 100B or Math 33A. Introduction to basic terms and analysis and machine intelligence designed for advanced undergraduate and graduate students. Concurrently scheduled with course C161. S/U or letter grading.

271. Probabilistic Models of Visual Cortex. (4) Seminar, three hours. Requisite: course 100B or Mathematics 33A. Recommended: Computer Science 180. Introduction to state-of-art computational models of the visual cortex, with topics in low-, mid-, and high-level vision. Discussion of relevant evidence from anatomy, electrophysiology, imaging (e.g., fMRI), and psychophysics. Concentration on mathematical modeling of these phenomena, taking into account recent progress in probabilistic models of computer vision and developments in machine learning. S/U or letter grading.

C273. Applied Geostatistics. (4) Lecture, three hours; discussion, one hour. Geostatistics can be applied to spatial data arising from different processes, such as hydrology, traffic, air and water pollution, epidemiology, economics, geography, waste management, forestry, oceanography, meteorology, and agriculture and, in general, to every problem where data are observed at geographic locations. Acquisition of knowledge from different areas that can be used to analyze real spatial data problems and to connect geostatistics with geographic information systems. Concurrently scheduled with course C173. S/U or letter grading.


285. Seminar: Computing for Statistics. (2 to 4) Seminar, one to three hours. Topics in statistical areas by means of lectures and informal conferences with staff members. S/U grading.

M286. Seminar: Statistical Problem Solving for Populations of Cells. (4) Seminar, two hours. Designed for graduate students. Statistical solutions to complex data analysis and/or experimental design problems encountered by biology graduate students in their own research. S/U or letter grading.

287. Seminar: Gene Expression and Systems Biology. (2) Seminar, two hours. Designed for graduate students (open to undergraduate students with consent of instructor). With high-throughput technologies such as genomic sequencing, microarray gene expression, Chromatin-Immunoprecipitation DNA chip (ChIP-chip), and mass spectrometry (MS/MS) proteomics, scientists are collecting genetic, genomic, and pathway data at rates far beyond imagination one decade ago. Such gigantic volumes of data produced cannot be analyzed and understood without highly sophisticated, computer-intensive approaches based on mathematical and statistical principles. Cutting-edge researches research from statistical data analytic point of view. S/U or letter grading.

290. Current Literature in Statistics. (2) Seminar, one hour. Topics in various statistical areas by means of lectures and informal conferences with staff members. S/U grading.

291SL. Service Learning for Graduate Student Consulting. (4) Research group meeting, two hours; fieldwork, two hours. Exposure to realistic statistical and scientific problems that appear in typical interactions between statisticians and researchers, with lectures centered on case studies presented by faculty members and invited speakers from business and academic fields. Applied regression analysis and design of experiments, together with basic statistical programs. In-class assignments and written reports required. S/U or letter grading.

292. Graduate Student Statistical Packages Seminar. (1 to 2) Seminar, two hours. Introduction to various statistical packages. How to handle data in different packages (input, output, data management, treatment of missing data), general syntax of different statistical packages. How to handle data in different statistical packages. General overview of different statistical packages and, in general, to every problem where data are observed and understood without highly sophisticated, computer-intensive approaches based on mathematical and statistical principles. Cutting-edge researches research from statistical data analytic point of view. S/U or letter grading.

297SL. Service Learning and Community Learning for Statistics. (2 to 4) Seminar, three hours; fieldwork, 10 hours. To further knowledge by applying what students have learned in class to an actual service work setting under guidance of faculty mentor. Interaction with nonprofit organizations can be either on location or over the Internet. May be used for MS thesis; research paper/project required. S/U or letter grading.

317. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

400. Introduction to Probability Modeling. (4) Lecture, three hours; discussion, one hour. Preparation: calculus and linear algebra. Limited to Master of Applied Statistics students. Introduction to probability theory, probability models, and stochastic processes, with emphasis on concepts, intuitions, calculations, and real applications. S/U or letter grading.

401. Survey of Methods in Modern Statistics. (4) Lecture, three hours; discussion, one hour. Limited to Master of Applied Statistics students. Overview of fundamental concepts of data analysis and statistical inference with detailed discussion of how these aspects differ in different fields. Arc of statistical investigation, including data collection, data exploration, formal inference, and model checking. S/U or letter grading.

403. Mathematical Statistics. (4) Lecture, three hours; discussion, one hour. Limited to Master of Applied Statistics students. Basic concepts of mathematical statistics and their applications. Mathematics used to prove various statistical theorems, with emphasis on real-world applications. Estimation and statistical inference. Random variables and their distributions; random vectors, their means, variances, variance-covariance matrix; and multivariate normal distribution. Testing, F-tests, and other multivariate statistical techniques such as central limit theorems. S/U or letter grading.


405. Statistical and Graphical Data Analysis. (4) Seminar, discussion, one hour. Limited to Master of Applied Statistics students. Introduction to state-of-art applications of linear model for understanding systems and predicting outcomes. Topics include review of statistical inference, properties of least-squares estimates, interpreting linear model, prediction and confidence intervals, model building, diagnostics, and bootstrap techniques. S/U or letter grading.

Advanced Regression and Predictive Modeling. (4) Lecture, three hours; discussion, one hour. Limited to Master of Applied Statistics students. Often we are interested in making inferences and predictions from data, either by (1) estimating particular mean parameters of models or (2) finding the best fitting model that we can then manipulate to produce useful outputs such as predictions or counterfactual estimates. Focus on what is done when linear models are not appropriate and may produce misleading estimates. Generalized linear model and maximum likelihood methods as essential tools all statistics students should understand. Examination of shift gears to explore regression and classification techniques that have been ubiquitous in machine learning literature in recent years, with special attention to regularization and kernelized methods. S/U or letter grading.

Machine Learning. (4) Lecture, three hours; discussion, one hour. Limited to Master of Applied Statistics students. Recommended preparation: linear algebra, calculus, basic computer programming knowledge. Introduction to machine learning and data mining methods. To gain in-depth understanding of these methods, implementation of them in R, Python, and C++. S/U or letter grading.


Introduction to Forecasting. (4) Lecture, three hours; discussion, one hour. Limited to Master of Applied Statistics students. Designed for physical and social sciences students who are interested in using statistics and its applications for forecasting and data-driven decisions and for life sciences and medical school students who are interested in modeling of historical data to predict outcomes. Introduction to state-of-art statistical methods that rely on historical data collected in past to forecast future outcomes. Coverage of models used for forecasting only one measurement type and models used to forecast several types of measurements simultaneously. S/U or letter grading.

Applied Geostatistics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 401, 402, 403. Limited to Master of Applied Statistics students. Introduction to fundamentals of analysis of types of spatial data, spatial datasets, temporal datasets frequently arising in geostatistical problems. Geostatistical data arise commonly in nearly every science, wherever spatial and spatial-temporal data are obtained. Examples include geology, hydrology, traffic, air and water pollution, epidemiology, economics, geography, waste management, forestry, oceanography, meteorology, and agriculture. Theory and modern methods for analyzing both lattice and point process data using R, and student performances of their own analysis of geostatistical datasets involving variogram modeling, kriging, model fitting, and estimation using maximum likelihood and nonparametric methods. S/U or letter grading.

Models in Finance. (4) Lecture, three hours; discussion, one hour. Limited to Master of Applied Statistics students. Exposure to several statistical techniques of importance to modern theory, and hands-on experience by applying various models on real stock market data using package stockPortfolio of open source statistical software R. S/U or letter grading.


Experimental Design. (4) Lecture, three hours; discussion, one hour. Requisites: courses 402, 403. Limited to Master of Applied Statistics students. Fundamentals of designing experiments to gain maximal information while minimizing costs. Topics include role of randomization and blocking, comparing two or more treatments, randomized blocks, factorial design. Latin square designs, fractional factorial designs, response surface designs. S/U or letter grading.

Statistics Programming and Analysis with R. (1 to 4) Seminar, one hour. Teaching of researchers and data analysts in use of R, software environment for statistical computing and graphics, in applied settings and taught in three tracks—data to graphics in R, basic statistical analysis in R, and advanced topics in R. S/U or letter grading.

Teaching College Statistics. (2) Seminar, two hours; intensive training at beginning of Fall Quarter. Required of all potential departmental teaching assistants and new PhD students. Practical and theoretical issues in teaching of statistics. S/U grading.

Teaching College Statistics. (2) Seminar, two hours. Weekly discussion and intensive training for all first-year teaching assistants that addresses practical and theoretical issues in using technology to teach statistics, including use of statistical software as education tool. S/U grading.

Statistics Internship. (2 to 4) Tutorial, four hours; field work, two hours. Under faculty supervision, production of substantial paper relating to or arising from internship. S/U or letter grading.

Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. Supervised individual reading and study on project approved by a faculty member. May be repeated for credit. Letter grading.

MAS Thesis Research. (2 to 8) Tutorial, four hours. Research on thesis project for MAS students. Project should be original analysis of data that solves pressing problem and is done typically in conjunction with an industry partner. May be repeated for credit with permission from program chair or instructor. S/U grading.

Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. Supervised individual reading and study on project approved by a faculty member. May be repeated for credit. Letter grading.


PhD Dissertation Research. (2 to 12) Tutorial, to be arranged. Preparation: advancement to PhD candidacy. Study and research for PhD dissertation. May be repeated for credit. S/U grading.

STUDY OF RELIGION
See Religion, Study of

SURGERY
David Geffen School of Medicine
72-131 Center for Health Sciences
Box 951749
Los Angeles, CA 90095-1749
310-206-2567
http://surgery.ucla.edu

Ronald W. Busuttil, MD, PhD (William P. Longmire, Jr., Professor of Surgery), Executive Chair
Richard J. Shemin, MD (Robert and Kelly Day Professor of Cardiothoracic Surgery), Executive Vice Chair
O. Joe Hines, MD (Robert and Kelly Day Professor of General Surgery), Vice Chair
Clinical Practice and Strategic Planning
Clifford Y. Ko, MD, MS(HS) (Robert and Kelly Day Professor of Surgical Outcomes), Vice Chair, Clinical Research
Jerzy W. Kupiec-Weglinski, MD, PhD (Paul I. Terasaki Professor of Surgery), Vice Chair, Basic Research
Areti Tillou, MD, Vice Chair, Surgical Education
Robert S. Bennion, MD, Vice Chair, Olive View-UCLA
Nand S. Datta, MD, Vice Chair, Drew University
Christian M. de Virgilio, MD, Vice Chair, Harbor-UCLA
Bruce L. Gewertz, MD, Vice Chair, Cedars-Sinai
Matthias G. Stelzner, MD, Vice Chair, VA
Greater Los Angeles Healthcare System

Scope and Objectives
The Department of Surgery instructs medical students during all four years of medical school. Students are expected to obtain broad knowledge of diseases treated by surgical means and to understand the pathophysiology of these conditions, the therapy that may be applied, and the anticipated results of treatment. They are also encouraged to learn about the effects of surgical illness on the patient and the patient’s family and environment.

Third-year students participate in one 12-week core clerkship in clinical surgery and are assigned to rotations at a combination of Reagan UCLA, Cedars-Sinai, Harbor-UCLA, West Los Angeles VA, Olive View-UCLA, Kaiser Permanente, and Santa Monica-UCLA medical centers. Each facility has a special orientation depending on the patient population and the individual staff. During the fourth year students may elect to take additional clinical rotations with increasing responsibilities. Additional in-depth elective courses are offered in collaboration with other departments.

For more details on the Department of Surgery and a listing of the courses offered, see the department website.

Surgery
Upper-Division Course
199. Directed Research in Surgery. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.
Theater
School of Theater, Film, and Television
303 East Melnitz Building
Box 951622
Los Angeles, CA 90095-1622
310-825-7008
info@ft.tft.ucla.edu
http://www.ft.tft.ucla.edu/programs/theater-department/

Brian E. Kite, MFA, Chair

Professors
J. Ed Araiza, BA
Myung Hee A. Cho, MFA
Hanay L. Geogamah, BFA
Michael J. Hackett, PhD
Neil P. Jampilos, BFA
Chrisi Karvonides-Dushenko, MFA
Suk-Young Kim, PhD
Brian E. Kite, MFA
Deborah Nadoolman Landis, PhD
Rich S. Rose, MFA
Dominic A. Taylor, MFA
Jose Luis Valenzuela, BA
Edit E. Villarreal, MFA

Associate Professors
Lucy M. Burns, PhD
Patricia M. Harter, PhD
Robert H. Hethmon, PhD
Anna Krajewska-Wieczorek, PhD
Michael S. McLain, PhD
Joanne T. McMaster, MFA
Mel Shapiro, MFA
Carol J. Sorgenfrei, PhD
William D. Ward, MFA
William T. Wheatley, PhD
Margaret L. Wilbur, MFA

Emeritus
Mark Worthington
Mary Lynn B. Wissner
Natsuo Tomita
Jonathan Snipes
Peter J. Shushtari, MFA
Angela R. Scott
Nathan M. Schroeder
Peter J. Shushtrui, MFA
Jonathan Snipes
Philip J. Storr
Natsuo Tomita
Jonathan Wang, BS, MSOM
Mary Lynn B. Wisner
Mark Worthington

Adjunct Professors
F. Nicholas Gunn
Peggy Hickey-Perez
Lainie Kazan
Jean-Louis Rodrigue

Adjunct Associate Professors
Dan T. Beizer, MFA
Marilyn E. Fox
Linda Korns
Jeremy L. Mann
Ed J. Monaghan, MFA
Judith E. Moveal, MFA
April Shawhan
Paul M. Wagor

Adjunct Assistant Professor
Raquel M. Barreto

Visiting Associate Professors
Cynthia M. Ettlinger
Tim Robbins

Visiting Assistant Professors
Silvia Baker
Christopher L. Beatty
David D. Dunham
Jessica Kubiszansky

Academic Administrator
Daniel A. Ionazzi, Jr., MBA

Scope and Objectives
The Department of Theater offers comprehensive training for the profession, as well as serious study of theater's long history and rich literature. Drawing on this vibrant heritage, the curriculum promotes an awareness of theater as a global phenomenon embodying the contributions of diverse cultures and explores theater as a forum for reflecting the human experience as revealed through the dynamics of theater production. With this in mind, students engage in the presentation of dramatic work in a community where creativity and critical thought combine in the exploration of the artistic and intellectual challenges inherent in the making of theater.

Manifesting talent and promise as well as representing a wide range of backgrounds and interests, prospective students are selected by the faculty through auditions and interviews in cities throughout the U.S. At the undergraduate level, students receive education in acting, design and production, directing, musical theater, and playwriting, all within the rigorous liberal arts framework of the BA degree. The department also offers a Theater minor.

At the graduate level, students in the MFA program develop as artists and are given preprofessional training in the skills of theater, while PhD students engage in critical investigations of the art form. In conjunction with their theater studies, students also have the opportunity to pursue elective courses in the area of film and television.

For current or specific information about the programs and faculty members, see the department website.

Undergraduate Study
The Theater major is a designated capstone major. Theater capstone courses represent the highest level of student scholarship/artistic achievement in each of the undergraduate areas. They are the culmination of all the broad educational courses and core foundational courses that have come before. Group participation in the creation and production of student projects is core to the curriculum. Capstone courses vary by area and require individual projects or performances, a major artistic contribution to a theater production, or an individual course of study resulting in a research paper. Through their capstone work, students demonstrate general knowledge and specialized skills, successfully relate their experience in a studio, production, or fieldwork setting, communicate effectively orally and in writing, and engage with a community of artists and scholars presenting theatrical work.

Theater BA
Capstone Major
The Theater BA provides students with a liberal education by combining critical study of theater with experiential practice in one or more of its component parts. Students explore acting, design, directing, playwriting, and production to build a foundation for future creative work. Specialized and advanced training is available to prepare students for a variety of careers, further training, or graduate study. At the upper-division level, students choose from an array of advanced elective courses in acting, design and production, directing, musical theater, and playwriting.

Admission
All applicants must meet the admission standards of UCLA and the departmental screening process. Applications are accepted only in November for admission to the following fall quarter. There are no mid-year admissions. Students must submit required supplemental materials directly to the Theater Department. All applicants must also sign up for an audition and/or interview online. There is a $90 fee for all interviews/auditions.

Applicants interested in one of the elective sequences in acting, design and production, directing, musical theater, or playwriting may submit materials for consideration in one or more areas.

Preparation for the Major
Required: Theater 11, 12, 13, 14A, 14B, 14C, 50 (must be taken for 4 units total).

The Major
The major consists of Theater 101A, 101B, 101C, one course from 102A through 113, 131C or 163C or 180 (capstone seminar), 150 (4 units), and 34 upper-division theater elective units. Up to 8 units of upper-division credit in the Department of Film, Television, and Digital Media.
may be included in the 34-unit theater elective requirement.

Majors wishing to pursue one of the elective sequences in the areas of (1) acting, (2) design and production, (3) directing, (4) musical theater, or (5) playwriting and criticism are expected to complete a sequence of elective courses.

Students who do not select one of the elective sequences or who wish to pursue an individualized plan are expected to meet with the undergraduate vice chair at the beginning of each year to plan their course of study.


The Ray Bolger Musical Theater Program electives include drama, movement, and dance for the musical theater and provide students with a series of courses that promote the study of theater as a global phenomenon for reflecting the human experience. The minor consists of a selection of lower-division courses that expose students to the fundamentals of theatrical production, as well as acting, writing, and directing. Upper-division courses offer more focused study of those areas, as well as theater design, history, education, and theater of non-Western cultures.

The musical theater elective sequence consists of Theater 30, 130A, 131A, 131B. Students must also complete Theater 131C (capstone seminar).

The design and production electives introduce design principles and investigate the design of scenery, lighting, costumes, and sound for theater, film, and television in lower-division courses. Four design and production areas of study are available at the upper-division level—scenic design, costume design, lighting design, and sound design. Students select from an array of design skills courses to develop proficiency in essential areas of rendering, drafting, painting, computer-aided design, and technology. Courses in art, history, and philosophy build an understanding of the social history of visual ideas. A sequence of courses in each area of study examines design principles and practice specific to each field. The design and production elective sequence consists of 14 units from Theater C146A, C146B, C146C, 147A, 147B, C154A, C154B, C154C, C155A through C155G, C156A through C156F, C157A, C157B, C157C, C158A, C158B, C158C, 174A, 174B, and three advanced design courses from one of the following groups: (1) C151A, C151B, C151C, (2) C152A, C152B, C152C, (3) C153A, C153B, C153C, or (4) C154A, C154B, C154C (unless taken above). Students must also complete Theater 180 (capstone seminar).

The directing electives explore the basic theories of play direction, as well as text analysis and craft fundamentals. Advanced courses emphasize psychological aspects of director-actor communication and development of specific directorial and production styles. The directing elective sequence consists of Theater 160, 163A, 163B, 163D. Students must also complete Theater 163C (capstone seminar).

The Ray Bolger Musical Theater Program electives train selected students in acting, singing, and dance for the musical theater and provide knowledge of musical theater history. Additional courses provide hands-on training with professional artists and a range of performing experiences from workshops to full productions. The musical theater elective sequence consists of six terms of training in performance courses selected from Theater 1A, 1B, 1C, 23, 24A, 24B, 24C, 34A, 34B, 34C, 35A, 35B, 35C, 115A, 115B, 116A, 116B, 124A through 124F, 125A through 125F, 126A, 126B, 126C through 134F, 135A through 135F, 136. Students must also complete Theater 180 (capstone seminar).

The playwriting electives include specialized and advanced courses that prepare students to write one-act and full-length plays, books and lyrics for music theater, and scripts for the one-person show. The playwriting elective sequence consists of Theater 30, 130A, 131A, 131B. Students must also complete Theater 131C (capstone seminar).

Theater Minor

The Theater minor is designed for students who wish to augment their major program of study with a series of courses that promote the study of theater as a global phenomenon for reflecting the human experience. The minor consists of six terms of lower-division courses that expose students to the fundamentals of theatrical production, as well as acting, writing, and directing. Upper-division courses offer more focused study of those areas, as well as theater design, history, education, and theater of non-Western cultures.

To enter the minor students must be in good standing (minimum 2.0 grade-point average), have completed at least one approved UCLA theater minor course with a grade of C or better, and file a petition at the Student Services Office, 103 East Melnitz Building, 310-206-8441. All degree requirements, including the specific requirements for this minor, must be fulfilled within the unit maximum set forth by each student’s school or college.

Required Lower-Division Courses (6 to 10 units): Theater 10 and one course from 15, 20, 28A, 28B, 28C, 30.


A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor, and at least 16 units applied toward the minor must be taken in residence at UCLA. Transfer credit for any of the above is subject to department approval.

Each minor course must be taken for a letter grade. Majors. Introduction to basic music theater dance technique. Each course may be repeated once for credit. Letter grading.

2. Theater in Performance: International Theater Festival. (5) Lecture, three hours; discussion, two hours. Exploration of theater in performance as revealed in productions and guest artists of UCLA International Theater Festival, with emphasis on collaborative role of theater artists and active role of audience. Students view selected productions, go back stage to discover how they are realized, and meet creative team. Letter grading.

4. Israel and Palestine in Literature and Media. (5) Lecture, three hours; discussion, two hours. Readings in English. Exploration of Israel and Palestine through artistic, cultural, and political modes of analysis. Examination of selected works of literature, theater, and film dramatic by Israeli, Palestinian, and Western artists, looking beyond facile cultural clichés to deeper insights. Letter grading.

10. Introduction to Theater. (5) Lecture, four hours. Introduction to basic methods of interpretation in theater and performance throughout world. Topics illustrated by faculty members and guest speakers, visits to off-campus theaters, and reading from contemporary plays. Letter grading.

12. Introduction to Performance. (4) Lecture, two hours; studio, four hours. Investigation of phenomenon of performance and role of performer in theatrical events, including interpretation of drama through performance. Examination of various forms of theatrical performance and styles of expression, and development of acting, voice, and movement skills. Letter grading.

13. Play Reading and Analysis. (5) Lecture, three hours. Provides base for subsequent study in theater. Examination of various forms of text, dramatic by Israeli, Palestinian, and Western artists, including acting, directing, design, playwriting, and critical study. Letter grading.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Graduate Council of the UCLA Academic Senate voted to suspend admissions to the Theater C Phil and PhD degrees effective fall quarter 2014. Suspension of admissions to the Theater MA degree was granted some time ago. The Department of Theater offers a Master of Fine Arts (MFA) degree in Theater and Candidate in Philosophy (C Phil) and Doctor of Philosophy (PhD) degrees in Theater and Performance Studies.

Theater

Lower-Division Courses

1A-1B-1C. Introduction to Dance for Music Theater (FT-Studio, for Theater majors. Introduction to basic music theater dance technique. Each course may be repeated once for credit. Letter grading.

2. Theater in Performance: International Theater Festival. (5) Lecture, three hours; discussion, two hours. Exploration of theater in performance as revealed in productions and guest artists of UCLA International Theater Festival, with emphasis on collaborative role of theater artists and active role of audience. Students view selected productions, go back stage to discover how they are realized, and meet creative team. Letter grading.

4. Israel and Palestine in Literature and Media. (5) Lecture, three hours; discussion, two hours. Readings in English. Exploration of Israel and Palestine through artistic, cultural, and political modes of analysis. Examination of selected works of literature, theater, and film dramatic by Israeli, Palestinian, and Western artists, looking beyond facile cultural clichés to deeper insights. Letter grading.

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13. Play Reading and Analysis. (5) Lecture, three hours. Provides base for subsequent study in theater. Examination of various forms of text, dramatic by Israeli, Palestinian, and Western artists, including acting, directing, design, playwriting, and critical study. Letter grading.

14A-14B-14C. Introduction to Design. (5-5) Lecture, three hours; studio, six hours. Exploration of visual interpretation of drama. Study of styles and techniques of designers, collaborative role of designer, principles of design for scenery, lighting, costumes, and sound. Both technical and aesthetic groundwork for further study. Letter grading.
15. Introduction to Directing. (4) Lecture, two hours; studio, four hours. Investigation of role of director in theatrical production and theories of play direction, with emphasis on analysis and interpretation of dramatic work and its realization in production. Letter grading.


23. Musical Literacy for Singing Actors I. (2) Studio, three to four hours. Introduction to reading and understanding musical notation, musical terminology, and basic to complex rhythm-reading and sight-singing in C major. Letter grading.


26. Alexander Techniques. (2) Studio, three hours. Study and practice of Alexander techniques as method of developing balance, poise, and coordination of body and mind. Exploration of use of rhythm to expand movement potential of actors and relevant use of visual arts and animal studies to character development and to expansion of movement potential. P/NP or letter grading.

27. From Vaudeville to Standup Comedy. (4) Studio, three to four hours. Exploration of as many aspects of comedy using American vaudeville traditions, acts, and performers as historical base to experience importance of rhythm, timing, delivery, speech, and body language in all styles of comedy, to find value of improvisation/imagination as well as innovative writing skills in all comic forms, to discover how comedy draws from so many art forms, including music/songs, dance, storytelling, clowning, magic, design, and costume, and to build overall confidence/ease in comic performance skills. P/NP or letter grading.

28A-28B-28C. Acting, Voice, and Movement Workshops I, II, III. (1-1-1) Studio, six hours. Study of beginning acting technique, scene study, and development of voice and movement skills. Each course may be repeated for maximum of 12 units. Letter grading.

28D-28E-28F. Acting, Voice, and Movement Workshops I, II, III. (2-2-2) Studio, six hours. Study of beginning acting technique, scene study, and development of voice and movement skills. Each course may be repeated for maximum of 12 units. Letter grading.

30. Dramatic Writing. (4) Studio, three hours. Intended for Theater minors and other nonmajors. Exploration and development of creative writing skills for one or more of various forms of entertainment media. May be repeated twice for credit. Letter grading.


50. Theater Production. (1 to 2) Laboratory, three to six hours. Laboratory experience in various aspects of theater production, including stage management or member of technical crew. May be repeated for maximum of 8 units. Letter grading.

72. Production Practice in Theater, Film, Video, and Digital Media. (1 to 8) Studio, three hours. Exploration and laboratory experience in one or more of various aspects of production and postproduction practice for entertainment media, including theater, film, video, and digital media. May be taken for maximum of 8 units. Letter grading.

Upper-Division Courses

101A. Making Tradition. (5) Lecture, four hours; discussion, one hour. Examination of tradition/performance traditions in terms of how they were produced, including training techniques, archaic practices, and forms of history. Examples may include classical Greek tragedy, Noh and Kyogen, Zaju and Chuanqi, Quem Queritis/English medieval festival plays, Sanskrit drama, Yoruba/Egungun, Yaqui deer dance, depending on faculty and resources available. Letter grading.

101B. Reconstructing Theatrical Past. (5) Lecture, three hours; discussion, one hour. Reconstructing theater is understood in several ways: reconstruction of performance spaces such as New Globe and of specific production traditions such as nō剧 that seek to reestablish classical traditions. Letter grading.

101C. Deconstructing Theater. (5) Lecture, three hours; discussion, one hour. Exploration of deconstructive practices, performances, abstraction, and absurdism, with focus on theatrical movements, directorial adaptations, cultural translations, and new forms. Letter grading.

102A. Theater of Japan. (5) Lecture, three hours. Exploration of major theater traditions of Japan from emergence of earliest theatrical activity to present, including investigation of Noh, Bunraku, and Kabuki performance traditions.

102B. Theater of Southeast Asia. (5) Lecture, three hours. Examination of representative theatrical genre from various geographical areas in Southeast Asia to illustrate importance and contribution that theater plays in society today.

102C. Cross-Cultural Currents in Theater. (5) Lecture, three hours. Exploration of interculturalism in theater, with focus on 20th-century alternatives to naturalism. Analysis of historical materials and dramatic texts to investigate cultural, aesthetic, ethical, and social implications of borrowing from other cultures. Letter grading.

102E. Theater of Non-European World. (5) Lecture, three hours. Examination of representative theatrical forms of non-European world in which primary attention is concentrated on examination and analysis of traditional dance-drama and puppet theaters of East Asia, Southeast Asia, South Asia, Middle East, and Africa. Analogous forms from European theater included for comparative purposes. P/NP or letter grading.

103A. African American Theater History: Slavery to Mid-1800s. (4) Same as African American Studies M103A.) Lecture, three hours. Designed for juniors/seniors. Exploration of extant materials on history and literature of theater as developed and performed by African American artists in America from slavery to mid-1800s. Letter grading.

103B. African American Theater History: Minstrel Stage to Rise of American Musical. (4) (Same as African American Studies M103B.) Lecture, three hours. Designed for juniors/seniors. Exploration of extant materials on history and literature of theater as developed and performed by African American artists in America from minstrel stage to rise of American musical. Letter grading.

103C. Origins and Evolution of Chicano Theater. (5) (Same as Chicana and Chicano Studies M103C.) Lecture, three hours. Designed for juniors/seniors. Exploration of development of Chicano theater from its beginning in legends and rituals of ancient Mexico to work of Luis Valdez (late 1960s). P/NP or letter grading.

103D. Contemporary Chicano Theater: Beginning of Chicano Theater Movement. (5) (Same as Chicana and Chicano Studies M103D.) Lecture, three hours. Analysis and discussion of historical and political events from 1965 to 1980, as well as theatrical traditions that led to emergence of Chicano theater. Letter grading.

103E. African American Theater History: Depression to Present. (4) (Same as African American Studies M103E.) Lecture, three hours. Designed for juniors/seniors. Exploration of extant materials on history and literature of theater as developed and performed by African American artists in America from Depression to present. Letter grading.


103I. Israel and Palestine: Communities, Conflicts, Cultures, and Arts in Middle East. (4) Lecture, three hours. No background on or prior interest in history or required arts required. Examined by names of Zion, Holy Land, Palestine, and Israel is not just one place. It is a realm of imagination, envisioned and re-envisioned throughout history. It is at once real and imagined, sturdy and ephemeral. Examination of selected works of literature, performance, visual arts, film, and media by Israeli and Palestinian artists, as well as Western artists with interests in region. Looking beyond headlines and facile cultural cliches for deeper insights arts can offer into cultural conflict and community at large, to emerge with surprising conclusions. Letter grading.

104A-104B-104C. History of American Theater. (5-5-5) Lecture, three hours. Study of history of influence of different cultures, traditions, and technologies on development of theater as social institution in America. Letter grading. 104A. Revolutionary War to Civil War. 104B. Civil War to WWI. 104C. WWI to Present.

104D. New Playwrights, New Playwriting. (5) Seminar, three hours. Required for students in playwriting sequence. How to approach diverse range of new plays creatively changing shape of theater. Con- temporary look at plays written in last 15 years and how they reflect society. Reading of plays to build skills of manuscript analysis; development of working vocabularies of dramatic structures; exploration of different styles of acting, directing, and design that playwrights of today draw from. Letter grading.

104E. History of Design Décor Part I: Architecture and Decor—Antiquity to Early Neoclassical. (4) Lecture, four hours. Requisites: courses 14A, 14B, 14C. Study of pre-Renaissance architectural and interior decor as manifestation of cultural, social, economic, and political influences to provide historical framework for design of scenery, costumes, and lighting for theater, film, and television. May be repeated once for credit. Concurrently scheduled with course C404E. Letter grading.

104F. History of Design Décor Part II: Architecture and Decor—Industrial Revolution to 21st Century. (4) Lecture, four hours. Requisites: courses 14A, 14B, 14C. Study of post-Renaissance architectural and interior decor as manifestation of cultural, social, economic, and political influences to provide historical framework for design of scenery, costumes, and lighting for theater, film, and television. May be repeated once for credit. Concurrently scheduled with course C404F. Letter grading.

104G. History of Design for Performance Production Part I: Historic Costume from Prehistoric to Neoclassical. (4) Lecture, four hours. Requisites: courses 14A, 14B, 14C. Study of historic costume as manifestation of cultural, social, economic, and political influences to provide historical framework for design of costumes for theater, film, and television.
Survey of history of Western costume and civilian attire. May be repeated once for credit. Concurrently scheduled with course C404G. Letter grading.

C104I. History of Design for Performance Production Part II: Historic Costume from Neoclassical to 21st Century. (4) Lecture, four hours. Requisites: courses 14A, 14B, 14C. Study of historic costume as manifestation of cultural, social, economic, and political influences to provide historical framework for design of costumes for theater, film, and television. Survey of history of Western costume and civilian attire with global emphasis. May be repeated once for credit. Concurrently scheduled with course C404I. Letter grading.


107. Drama of Diversity. (5) Lecture, three hours; discussion, one hour (when scheduled). Study of diversity in American society as manifested in dramatic works and theatrical presentations. P/NP or letter grading.

108. Undergraduate Seminar: History and Criticism. (5) Seminar, four hours. Limited to 15 students. Selected topics in history and criticism of theater and performance. Study of how experimental theaters originate, how they imagine their form of performance, their audience, and their goals. May be repeated once for credit. P/NP or letter grading.


111A-111B-111C. Selected Topics in European Theater. (5) Lecture, three hours. Investigation in depth of selected periods and subcategories of decor and costume. Visual representation, with emphasis on influences of global diverse cultures. May be repeated three times for credit. Concurrently scheduled with course C404J. Letter grading.

119. Special Topics in Critical Studies. (5) Lecture, three or four hours. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit. P/NP or letter grading.

M111. Variable Topics in Performance and Disability Studies. (4) Same as Disability Studies M114.) Seminar, four hours. Analysis and critique of depiction of disability in theater. Topics may include introduction to disability studies; race, gender, and disability; representation of disabilities. Letter grading. May be repeated for credit with topic or instructor change. P/NP or letter grading.

115A. Physical Systems of Acting: Foundations. (4) Lecture, six hours. Requisites: course 115B. Performance of original studies in physical theater and/or from physical theater repertory. Course activities, materials, and discussions based on contemporary physical theater practices. Letter grading.

115B. Physical Systems of Acting: Practice. (4) Studio, six hours. Requisites: course 115A, P/NP or letter grading. Performance of original studies in physical theater and/or from physical theater repertory. Course activities, materials, and discussions based on contemporary physical theater practices. Letter grading.


117B. Theater for Child Audience: Practice. (4) Studio, four hours. Requisites: courses 117A, 111D. Development of K-12 teaching materials to integrate theater with specific core curricula. Collaboration with classroom teacher to identify core subject to be taught. Language arts, science, history, mathematics, and social sciences are possible curricular areas. Development of evaluation tools to measure effectiveness of incorporating theater materials into curriculum. Weekly meetings to discuss teaching strategies and prepare written lesson plans that incorporate California Teaching Content Standards, objectives, motivation, detailed implementation of lesson plan, and ideas for extension. Letter grading.

118. ArtsBridge Teaching Practicum. (4) Lecture, four hours. Requisites: courses 118A, 118B. Development of K-12 teaching materials to integrate theater with specific core curricula. Collaboration with classroom teacher to identify core subject to be taught. Language arts, science, history, mathematics, and social sciences are possible curricular areas. Development of evaluation tools to measure effectiveness of incorporating theater materials into curriculum. Weekly meetings to discuss teaching strategies and prepare written lesson plans that incorporate California Teaching Content Standards, objectives, motivation, detailed implementation of lesson plan, and ideas for extension. Letter grading.


120A-120B. Acting and Performance in Film. (5-5) Lecture, six hours. Exploration of acting and performance in film. Through screenings of performance-driven films, class discussion, and acting exercises, examination of methods, styles, and performances of some of world’s most highly regarded actors and their work. P/NP or letter grading.

120C. Acting and Performance in Film. (5) Lecture, six hours. Exploration of acting and performance in film. Through screenings of performance-driven films, class discussion, and acting exercises, examination of methods, styles, and performances of some of world’s most highly regarded actors and their work. P/NP or letter grading.

121. Acting Workshop. (2) Studio, to be arranged. Requisites: course 20. Courses 160, 163A, 163B, and 163C may be taken concurrently. Workshop that provides students with acting and performance skills and attitude useful in facilitating discussions and critique. May be repeated once for credit. P/NP or letter grading.

C122. Character Development through Makeup and Hair Design. (2) (Formerly numbered 122.) Seminar, four hours. Requisites: course 110A. Exploration of makeup and hair design in film. History and overview of hair and makeup in fashion and motion pictures. Collaboration of makeup artists and hairstylists with costume designer, actors, production designer, and director to conceptualize people in script. Exploration of makeup artist and hairstylist roles in current film, television, and theater productions. Use of makeup and hair design in design and development of makeup and hair for film and television productions. Concurrently scheduled with course C222. Letter grading.


124A-124B-124C. Voice and Speech II. (1-1-1) Studio, three to four hours. Development of voice and speech techniques for stage. Letter grading.


127A-127B-127C. Movement and Combat I. (1-1-1) Studio, three to four hours. Study and practice of art of acting through perfecting of techniques and application of those techniques to acting problems. P/NP or letter grading.

128A-128B-128C. Acting, Voice, and Movement Workshops II. (2-2-2) Studio, four to six hours. Study of advanced acting technique, stage and voice. May be repeated for maximum of 12 units. Letter grading.

129A-129B-129C. Acting, Voice, and Movement Workshops III. (2-2-2) Studio, four to six hours. Study of advanced acting technique, stage and voice. May be repeated for maximum of 12 units. Letter grading.
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CM129. Contemporary Topics in Theater, Film, and Television. (2) (Same as Film and Television CM129.) Lecture, two hours; screenings, two hours. Limited to junior/senior and graduate theater/film and television students. Examination of creative process in theater, film, and television, with consideration of directing, design, production, and performance. Overview of individual contributions in collaborative effort; examination of distinctiveness and interrelations among these arts. Individual units include participation of leading members of theater, film, and television professions. May be repeated twice for credit. Concurrently scheduled with course CM129. Letter or P/NP grading.


130B. Fundamentals of Playwriting II. (4) Lecture, three hours plus conference. Requisite: course 130A. Study in original material for theater, its preparation and development. Designed to give further insight into critical and creating aspects of short and full-length plays and guidance in completion of one-act and full-length plays. May be repeated twice for credit. P/NP or letter grading.

130C. Writing for American Musical Theater. (4) Lecture/laboratory, three hours. Study of practice and techniques used in writing libretto for musical theater: opening numbers, romance, subplots, and comedy. May be repeated once for credit. P/NP or letter grading.


C133A-C133B-C133C. Script Development Workshops. (4) Three hours; studio, four to 24 hours. Guided process of script development, with emphasis on communication, artistic growth, and professional process. Each course may be taken for multiple credits. Concurrently scheduled with courses C433A-C433B-C433C. Letter grading.


136. Advanced Acting for Stage. (4) Studio, four hours. Requisite: course 132. Study and practice of art of acting through progression to more advanced acting problems. May be repeated twice for credit. Consecutive enrollment with same instructor not permitted. Total units for courses 135, 137A, 137B, and 137C may not exceed 12 units. Letter grading.

137A-137B-137C. Continual Study in Acting for Stage. (4-4-4) Studio, six hours. Requisite: course 123. Technique of characterization and performance in advanced and complex acting styles. Each course may be repeated once for credit. P/NP or letter grading.

138. Special Problems in Performance Techniques. (4) Studio, four hours. Study of complex problems in voice, movement, and acting. May be repeated twice for credit. P/NP or letter grading.

139. Play Reading and Analysis. (5) Lecture, three hours. Investigation of dramatic texts, with focus on play structure, plot, character, dialog, ideas, and various other elements essential to effective theatrical interpretation and rendering. Concurrently scheduled with course C410A. Letter grading.


140B. Advanced Programming for Entertainment Design. (4) Studio, three hours. Study and practice in object-based programming using MAX/MSP programming language to control sound and video. May be repeated once for credit. Concurrently scheduled with course C440B. Letter grading.

140C. Advanced Projects in Programming for Entertainment Design. (4) Studio, three hours. Advanced projects using object-based programming to control sound and video. May be repeated once for credit. Concurrently scheduled with course C440C. Letter grading.

144A-C144B-C144C. Advanced Sound Design. (4-4-4) Lecture, four hours; laboratory, four hours. Concurrently scheduled with courses C444A-C444B-C444C. Letter grading.

144A. Lecture, four hours; laboratory, four hours. Study of sound and acoustics as they relate to performance environments, techniques associated with recording, mixing, processing, automation, and reproduction of dialogue, effects, and music tracks of a design. May be repeated once for credit. Letter grading.

144B. (4) Lecture, four hours; laboratory, four hours. Advanced study and practice in preparation and recording of theater sound designs, with emphasis on analysis of script and score, conceptual development of design, and multitrack recording techniques to realize design. May be repeated once for credit. Letter grading.

144C. (4) Lecture, four hours; laboratory, four hours. Study and practice in processing and mixing of live and recorded sound; mix-down of multitrack recordings; preparation of sound tracks and sound reinforcement in theater. Study of sound effects, control of MIDI data, and design techniques for music theater. May be repeated once for credit. Letter grading.

145. Costume Design for Theater. (4) Lecture/laboratory, four hours. Design of costumes for theatrical presentations. Study of use of silhouette, fabrics, color, and decoration as related to theatrical characterization. May be repeated once for credit. P/NP or letter grading.

146. Art and Process of Entertainment Design. (4-4-4 to 8) Lecture. Conceptualization, design, and prototyping of interactive theatrical events. Concurrently scheduled with courses C446A-C446B-C446C. Letter grading.

146A. (4) Lecture, three hours. Exploration of original forms of media-rich entertainment experience through lectures, presentations, and seminar participation. Students form collaborative teams to conceive and propose entertainment events. Letter grading.

146B. (4) Lecture, three hours. Prototype development; two to five proposals to be more completely defined and developed into collaborative teams for further conceptual development of their project proposals. May be repeated once for credit. Letter grading.

146C. (4 to 8) Lecture, three to six hours. Prototype development; conceptual refinement and technological realization of prototypes, that may entail creation of elaborate proposals containing storyboards, budgets, and models or may involve production of short performances demonstrating entertainment potential of concepts or prototypes. May be repeated once for credit. Letter grading.

147A. Drafting. (4) Studio, four hours. Development of visual communication skills through drafting. Exploration of drafting for scenic and lighting designs. May be repeated once for credit. Letter grading.

147B. Drawing Scenenery. (4) Studio, four hours. Introductory course in basic skills necessary for drafting by hand. Study of scenic design for theater. Letter grading.

148. Special Courses in Design and Technical Theater. (4) Lecture, three hours. Group study of selected subjects in design and technical theater. May be repeated twice for credit. P/NP or letter grading.

149. Introduction to Design. (5) Lecture, three hours. Exploration of interpretation of drama through design, including study of styles and techniques of design, collaborative role of designer, principles of design, and design applications in various aspects of theater production, including performance in project or production, stage management, member of crew, or assignment as designer or assistant on production. May be repeated for maximum of 8 units. Letter grading.

151A. Scenic Design. (4) Lecture/studio, four hours. Requisites: courses 14A, 14B, 14C. Imaginative presentation of design as impetus for design, text analysis, metaphor, and conceptualization. Investigation of design research process, composition, and style leading to visual presentation of design. May be repeated once for credit. Concurrently scheduled with course C451A. Letter grading.

151B. Scenic Design for Theater. (4) Lecture/studio, four hours. Requisites: courses 14A, 14B, 14C. Study of scenic design for proscenium, thrust, and arena configurations, multiprojective sets, and music theater. May be repeated once for credit. Concurrently scheduled with course C451B. Letter grading.

151C. Production Design for Film, Television, and Video. Lecture/studio, four to six hours. Study of role of art director, scenic design for single-camera and multicamera production, and set decoration. May be repeated once for credit. Concurrently scheduled with course C451C. Letter grading.


152C. Lighting Design for Performances and Special Events. (4) Lecture, four hours. Requisites: courses C152A, C152B, C152C. Advanced topics in lighting design, including live performances for concerts, exhibitions, and special events. Concurrently scheduled with course C452D. Letter grading.

153A. Costume Design. (4) Lecture/studio, four hours. Requisites: courses 14A, 14B, 14C; for transfer students: course 149. Imagination as impetus for design, text analysis, metaphor, and conceptualization.
Investigation of design research process, composition, and style leading to visual presentation of design. May be repeated twice for credit. Concurrently scheduled with course C453A. Letter grading.

C153B. Costume Design for Theater. (4) Lecture/studio, three hours; for transfer students: courses 14A, 14B, 14C; for transfer students: course 14B. Study of costume design for proscenium, thrust, and arena configurations, multiset productions, and music theater. May be repeated twice for credit. Concurrently scheduled with course C453B. Letter grading.

C153C. Costume Design for Film and Television. (4) Lecture/studio, four hours. Requisites: courses 14A, 14B, 14C; for transfer students: course 14B. Study of untraditional costume design and wardrobe practices in film and television, including effect of differing media on design choices. May be repeated twice for credit. Concurrently scheduled with course C453C. Letter grading.

C153D. Projects in Costume Design Management. (4) Lecture, three hours. Examination of professional duties of costume designers, set costumers, and supervisors, especially management of production logistics, including budget management, rentables, business forms, contracts, marketing, and setting of standards for the industry. May be repeated once for credit. Concurrently scheduled with course C453D. Letter grading.

C153E. History of Costume Design in Movies. (5) Lecture, three hours; screenings, three hours. History of costume design within context of 20th-century fashion and film history, including evolution of role of costume designer since early days of film industry. Role of costume designer and contribution of costumes to storytelling. Concurrently scheduled with course C453E. Letter grading.

C153F. Practice of Costume Design for Film Productions. (4) Lecture, three hours. Introduction to costume design as tool for storytelling, exploring integration of costume design and film-making process and what it takes to bring characters to life. Skills needed to effectively costume short narrative films, including script breakdown, collaboration with directors and actors, and how to manage production challenges. Concurrently scheduled with course C453F. Letter grading.

C154A. Sound Design. (4) Lecture/studio, four hours. Requisites: courses 14A, 14B, 14C. Exploration of sound design for theater and techniques for mixing, reinforcement, and signal processing. Topics include use of delay, equalization, and microphone placement for theater sound reinforcement, sound effects, and control of MIDI data, and design techniques for musical theater. May be repeated once for credit. Concurrently scheduled with course C454A. Letter grading.

C154B. Sound Design for Theater. (4) Lecture/studio, four hours. Requisites: courses 14A, 14B, 14C. Exploration of sound design for theater and techniques for mixing, reinforcement, and signal processing. Topics include use of delay, equalization, and microphone placement for theater sound reinforcement, sound effects, and control of MIDI data, and design techniques for musical theater. May be repeated once for credit. Concurrently scheduled with course C454B. Letter grading.

C154C. Sound for Film and Television. (4) Lecture/studio, four hours. Study of current professional sound recording, rerecording, mixing, and synchronization practices for film and television. Concurrently scheduled with course C454C. Letter grading.


C155A. Perspective Drawing. (2) Studio, four hours. Requisite: course 147A or 147B. Introduction to use of pencil and pen to communicate design ideas, including one- and two-point perspective, form light, shade, and textures. Letter grading.

C155B. Multimedia Rendering. (2) Studio, four hours. Study and practice of multimedia rendering techniques as they relate to interpretation of scenic, lighting, and costume renderings, with focus on human form in space. Weekly demonstrations of wide variety of print media, color theory, perspective, pastel, and collage rendering. May be repeated twice for credit. Letter grading.

C155C. Digital Rendering. (2) Studio, four hours. Study and practice in rendering costumes, lighting, and scenic elements with combination of hand and digital rendering techniques. Coverage of rendering from life, enhancing final rendering with variety of computer-generated effects, making presentation of two-dimensionals renderings for projection. Concurrently scheduled with course C455C. Letter grading.

C155D. Model Making. (2) Studio, four hours. Requisite: course 147A or 147B. Study of model for representation of scenic designs from initial working prototypes to finished color models. Use of wide variety of materials and techniques for execution of model. Letter grading.

C155E. Life Drawing. (2) Studio, four hours. Requisite: course 147A or 147B. Study and practice in drawing of human form. Letter grading.

C155F. Costume Rendering. (2) Studio, four hours. Requisite: course 147A or 147B. Study of scenic painting techniques and materials and their representation of color design and elevations. May be repeated once for credit. Letter grading.


C157A-C157B-C157C. Costume Construction Techniques. (2-2-2) Studio, four hours. Study of theory and application of pattern making, marking, cutting, and construction techniques for period costumes and undergarments to achieve authentic-appearing costume using contemporary methods. Each course may be repeated once for credit. Concurrently scheduled with courses C457A-C457B-C457C. P/NP or letter grading.


160. Fundamentals of Play Direction. (5) Lecture, two hours; laboratory, four hours. Course 121 may be taken concurrently. Basic theories of play direction and their application through preparation of scenes for undergraduate conditions. P/NP or letter grading.


163A. Lecture/studio, four hours. Requisite: course 15. Intensive development of primary directing skills and process, including text analysis and exploration of craft fundamentals as basis for director/actor communication and effective coaching. Students direct scenes from plays under laboratory conditions. Letter grading.

163B. Lecture/studio, four hours. Requisite: course 15. Further development of craft elements of directorial method, with additional emphasis on psychological aspects of director/actor communication. Students direct scenes under laboratory conditions in alternative stage configurations. Letter grading.


C163D. Directing Project for Stage. (5) Discussion, three hours; laboratory, four to eight hours. Requisites: courses 163A, 163B, 163C. Application of stage directing techniques in production of short play or project. Students direct one-act play or project. May be repeated once for credit. Concurrently scheduled with course C263D. Letter grading.

170. Design and Production Project. (4) Laboratory, eight hours. Requisites: courses 14A, 14B, 14C. Experience as stage manager or designer, including participation in preparation and realization of scenic, lighting, costume, or sound designs, or stage management in production. May be repeated once for credit. Letter grading.
171A. Advanced Theater Laboratory. (1 to 4) Laboratory, to be arranged. Creative participation as actor or stage manager in public presentation of departmental productions. May be taken for maximum of 4 units. P/NP or letter grading.

171B. Advanced Theater Laboratory. (1 to 4) Laboratory, to be arranged. Creative participation in realization of production elements related to public presentation of departmental productions. May be taken for maximum of 4 units. P/NP or letter grading.

172. Production Practice in Theater, Film, Video, and Digital Media. (1 to 8) Studio, three to eight hours. Exploration and laboratory experience in one or more aspects of production and postproduction processes. Studio media may include theater, film, video, and digital media. May be repeated for maximum of 24 units. Letter grading.

173A. Design Assignment: Assistant Designer. (2) Studio, six hours. Requisites: courses 14A, 14B, 14C. Laboratory experience as assistant designer, including participation in preparation and realization of scenic, lighting, costume, or sound designs. May be repeated twice. Letter grading.

173B. Production Assignment: Designer. (2) Studio, six hours. Requisites: courses 14A, 14B, 14C. Laboratory experience as designer, including preparation and realization of scenic, lighting, costume, or sound designs. May be repeated twice. Letter grading.


174B. Project in Stage Management. (3) Studio, nine hours. Requisite: course 174A. Laboratory experience in professional duties of assistant stage manager, including participation as assistant stage manager in preproduction, rehearsal, and performance phases of productions. May be repeated once for credit. Letter grading.

174C. Project in Stage Management. (4) Studio, twelve hours. Requisite: course 174A. Laboratory experience in professional duties of stage manager, including participation as stage manager in preproduction, rehearsal, and performance phases of productions. Problems of unions, auditions, organization, scheduling, and responsibilities of lengthy run. May be repeated twice for credit. Letter grading.

174D. Advanced Stage Management Techniques. (2) Lecture, two hours; studio, two hours. Requisites: courses 147A, 147A. Professional duties of stage management. Practical training, including paper techniques, dry techniques, cue 2 cue, preset setup, performance reports, and quick change rehearsals. Letter grading.

175A-175C-175D. Summer Theater Workshops. (4 or 8 each) Laboratory, 12 to 24 hours. Participation in various aspects of theater production and performance. Offered in summer only. Letter grading.

175B. Summer Theater Workshop. (1 to 4) Laboratory, three hours. Participation in various aspects of theater production and performance. Offered in summer only. Letter grading.


M178. Film and Television Acting Workshop. (2) (Same as Film and Television M177) Laboratory, four hours. Workshop providing opportunities for students to rehearse, perform, and evaluate scenes. Three different production styles to which performers may need to adjust are (1) preproduction rehearsals with director, (2) single-camera experience, and (3) multiple-camera experience. May be repeated twice for credit. Letter grading.

180. Senior Project. (4) Lecture or studio, three hours. Requisites: courses 101A, 101B, 101C. Preparation of conceptual or creative project to provide culminating experience in production of creative or research work. May be repeated twice for credit. Letter grading.

181. Career Development for Actors. (2) Lecture, three hours; fieldwork, three hours. Limited to seniors. Study of career techniques, career entry, and development for actors. P/NP or letter grading.

C185A. Role of Producer in Professional Theater. (2) Lecture, three hours. Study of structure governing economic and artistic decision-making processes in professional theater of America. Concurrently scheduled with course C285A. P/NP or letter grading.

C185B. Role of Management in Educational and Community Theater. (2) Lecture, three hours. Study of artistic, social, and economic criteria in administration of educational and community theater. Concurrently scheduled with course C285B. P/NP or letter grading.

M187. Art Alive: Art and Improvisation in Museums. (4) (Same as Honors Collegium M116) Seminar, four hours. Offered in collaboration with Los Angeles County Museum of Art (LACMA). Interpretation of art in collection through acting, dialogues, movement, and music. Research into history and art and production of creative performance piece required. P/NP or letter grading.

195. Community or Corporate Internships in Theater, Film, and Television. (2, 4, or 6) Tutorial, eight, 16, or 24 hours. Internship at various theaters, studios, or entertainment organizations accentuating creative contributions, organization, and work of professionals in their various specializations. Students meet with instructor and provide periodic reports of their experience. May be taken for maximum of 8 units. Individual contract with supervising faculty member required. Letter grading.

199. Directed Research or Senior Project in Theater. (2 to 8) Tutorial, three hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

202A. Seminar: Western Classical Theater. (4) Seminar, three hours. Designed for graduate students. Examination of theatrical production and dramatic form in Greek and Roman periods. May be repeated twice for credit. S/U or letter grading.

202B. Seminar: Medieval Theater. (4) Seminar, three hours. Designed for graduate students. Study of selected topics in theatrical production and dramatic form in Middle Ages. May be repeated twice for credit. S/U or letter grading.

202C. Seminar: Renaissance and Baroque Theatre. (4) Seminar, three hours. Designed for graduate students. Selected studies in theater architecture, theatrical production, and dramatic form in English and Continental theater from 1485 to early 18th century. May be repeated twice for credit. S/U or letter grading.


205A-205B-205C. Background of Theatrical Art. (5-5-5) Seminar, three hours. Designed for graduate students. Selections from selected works of drama of the classical period, life and work of playwrights and performers, reference to social, economic, and historical developments. May be repeated four times for credit. S/U or letter grading.

207A-207B. Theater Aesthetics. (1 to 3) Lecture, three hours; fieldwork, one hour. Designed for graduate students. Study of prototypes of modern experience as illustrated in selected works of drama of the classical period, life and work of playwrights and performers, reference to social, economic, and historical developments. May be repeated four times for credit. S/U or letter grading.

209. Theater Authors. (5) Seminar, four hours. Designed for graduate students. Selection of major plays, playwrights, and plays of the classical and modern periods. May be repeated twice for credit. S/U or letter grading.

211A. Seminar: American Theater. (4) Seminar, three hours. Designed for graduate students. Study of selected topics in the history of American theater and drama of the 19th and 20th centuries. May be repeated twice for credit. S/U or letter grading.

219. Seminar: Theater and Film. (2) Seminar, two hours. Designed for graduate students. Study of selected problems in the development of the theater as a medium of visual imagery. May be repeated twice for credit. S/U or letter grading.

220P. Seminar: Traditions of African Theater. (4) Seminar, three hours. Designed for graduate students. Selected studies of traditional theater forms such as those indigenous to Ghana, Nigeria, and other African nations and their diaspora (Haiti, Jamaica, and other areas of Caribbean) through examination of character, structure, and archetypes. May be repeated twice for credit. S/U or letter grading.

220Q. Seminar: South Asian Theater. (4) Seminar, three hours. Designed for graduate students. Selections in theatre forms of South Asia, including dramatic literature, costume, theater spaces, and critical writings. May be repeated twice for credit. S/U or letter grading.

220R. Seminar: Southeast Asian Theater. (4) Seminar, three hours. Designed for graduate students. Selections in theatre forms of Southeast Asia, including dramatic literature, costume, theater spaces, and critical writings. May be repeated twice for credit. S/U or letter grading.

224. Theater Genres. (5) Seminar, four hours. Designed for graduate students. Investigation of history and literature of theater as manifested in one or more of its major forms or genres. May be repeated four times for credit. S/U or letter grading.


226. Themes in World Theater and Drama. (5) Seminar, four hours. Designed for graduate students. Selection of topics in world theater and drama study that explores significant issues and ethical considerations of modern world. May be repeated four times for credit. S/U or letter grading.


228A-228B. Dramaturgy I, II. (4-4) Lecture, three hours; laboratory, one hour. Designed for graduate students. Study of the theoretical and practical aspects of dramaturge’s work in contemporary theater. 228B. Required: course 228A. Continuation of study of theory and practice of dramaturgy.

228C. Practicum in Dramaturgy. (2 to 12) Laboratory, to be arranged. Required: course 228A. Demonstration of competence in practice of dramaturgy through completion of approved dramaturgical assignment. May be taken for maximum of 12 units. Letter grading.

229. Theater Authors. (5) Seminar, three hours. Designed for graduate students. Investigation of work of one theater artist from history of world theater, with religious experience, and revitalization of myth and ritual. May be repeated twice for credit. S/U or letter grading.
special emphasis on relationship to time in which work was generated. May be repeated four times for credit. S/U or letter grading.

210. Topics in World Theater and Drama. (5) Seminar, three hours; laboratory, one hour. Overview of current and historic representations in theater. May be repeated four times for credit. S/U or letter grading.

216A. Approaches to Representation. (5) Lecture, three hours; laboratory, one hour. Overview of key theories, methods, debates, and performance texts of identificatory structure between audience member or scholar and theatrical or performance object. Letter grading.

220. Graduate Forum. (1 to 4) Seminar, one to four hours. Limited to graduate theater students. Presentation and discussion of issues informing and affecting contemporary theater. May be repeated four times for credit. Letter grading.

221. Introduction to Performance Studies. (5) Seminar, three hours. Investigation of performance as sustained practice in traditional disciplines such as theater, music, and dance and as lens to focus thinking in fields such as philosophy, literature, cultural anthropology, linguistics, education, and law. Emphasis on establishing interdisciplinary dialogue across many fields. Letter grading.

C222. Character Development through Makeup and Hair Design. (2) Studio, four hours. Examination of importance of makeup and hair design in film, history and overview of hair and makeup in fashion and beauty. May be repeated for credit. S/U or letter grading. Letter grading.

CM230A-230B-230C. Writing for Contemporary Theater. (4 to 8 each) Lecture, three hours; studio, two hours. Designed for graduate students. Letter grading. CM230A. One-Act Play. Analysis of strategy and dramatic structure of selected contemporary short plays leading to guided completion and critique of student-written one-act plays. CM230B. Full-Length Play. Analysis of strategy and dramatic structure of selected contemporary full-length plays leading to guided completion and critique of student-written full-length play. CM230C. Performance and Text. Exploration of structural strategies, political implications, and technical demands of selected contemporary American plays leading to guided completion and critique of student work.

231. Special Topics in Playwriting. (4) Lecture, three hours. Analysis and practice of various aspects of playwriting. Various elements studied from topic such as comedy writing, docudrama, experimental theater, writing for alternative audiences, or children's theater. May be repeated twice for credit. Letter grading.

232. Manuscript Analysis. (4) Lecture, three hours. Designed for graduate students. Critical and constructive study of dramatic techniques as employed by major authors, focusing on selected examples of contemporary work. May be repeated once for credit. S/U or letter grading.


242. Introduction to Design in Production. (4) Lecture or studio, four hours. Introduction to process of design for entertainment, collaborative role of designer, and realization of designs in production. May be repeated once for credit. Letter grading.

243A-243B-243C. Scenic Design. (4-4-4) Studio, four hours. Advanced study and practice in scenic design for theater. Imagination as impetus for design, text analysis, metaphor, and conceptualization. Investigation of design research process, composition, and style leading to visual presentation of design. May be repeated once for credit. Letter grading.

244A-244B. Advanced Theater Production. (2 to 8 each) Studio, 12 to 24 hours. Designed for graduate students. Creative participation in preparation and presentation of theatrical performance. Each course may be taken for maximum of 8 units. Letter grading.

245A. Production Management. (4) Lecture, three hours. Study in production management for theater. Examination of professional duties of production manager, including production, rehearsal, and performance phases of productions. Problems of resource management, unions, organization, scheduling, and budgeting while maintaining creative and collaborative environment. Letter grading.

245B. Production Management. (4) Lecture, three hours. Requisite: course 245A. Advanced study in production management for theater, with focus on planning process of professional production manager in seasonal and repertory environment. Problems of resource allocation, unions, organizational structure, scheduling, and budgeting to establish creative and collaborative environment. Letter grading.

245C. Projects in Production Management. (4) Lecture/laboratory, three hours. Requisite: course 245B. Laboratory experience in professional duties of production manager, including participation as production manager, including participation in preproduction, rehearsal, and performance phases of productions. Problems of resource management, unions, organization, scheduling, and budgeting. Letter grading.

246A-246B-246C. History of Costume. (4-4-4) Lecture/discussion, three hours; studio, 48 to 120 hours. Designed for graduate students. Study of history of costume as manifestation of cultural, social, economic, and political influences to provide historical framework for design of costumes for theater, film, and television. History survey and in-depth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

246D. History of Costume Design. (4) Lecture, four hours. Study of history of costume as manifestation of cultural, social, economic, and political influences to provide historical framework for design of costumes for theater, film, and television. Letter grading.

247. Collaborative Project in Design and Production. (3 to 4) Studio, four hours. Designed for graduate students. Collaborative project in design, including analysis of structural strategies, and preparation of scenic designs for theater, film, and television. Letter grading.


250. Directing Post-Realist Drama. (4) Lecture, four hours; studio, 30 hours. Designed for graduate students. Problems in direction of post-realist plays through interpretation and laboratory scene work. Letter grading.

253. Production Project in Direction for Stage. (2 to 8) Discussion, one hour; studio, 12 to 30 hours. Designed for graduate students. Direction of dramatic work, with discussion and critique of work in progress. May be repeated for maximum of 20 units. Letter grading.

C263D. Directing Project for Stage. (5) Discussion, three hours; laboratory, four to eight hours. Requisites: courses 163A, 163B, 163C. Application of stage directing techniques in student play or project. Students direct one-act play or project. May be repeated once for credit. Concurrently scheduled with course C163D. Letter grading.

264. Directing Classical and Historical Drama. (4) Lecture, four hours; studio, 30 hours. Designed for graduate students. Problems in interpretation and direction of historical or classical drama through medium of laboratory scene work. Letter grading.

266. Modern Theories of Production. (4) Lecture, four hours. Examination of modern theories of production from emergence of director in 19th century to present. Investigation of different responses to problems of creating vital theatrical event in context of on-going evolution of theories of administration of production, contribution of significant directors and movements; relation between theater and other forms of representation. Letter grading.

268. Theatrical Conceptualization. (4) Lecture, four hours. Examination of process of conceptualization in dramatic production; centrality of theatrical conceptualization in interpretation of dramatic text; exploration of range of possibilities inherent in different theatrical spaces and options in design components. Consideration of visual arts and music as sources of stimulus for theatrical conceptualization, with focus on collaborative aspect of theatrical performance. Letter grading.

272. Production Practice in Theater, Film, Video, and Digital Media. (1 to 8) Studio, three to eight hours. Exploration and laboratory experience in one or more various aspects of production and postproduction practice for entertainment media, including theater, film, video, and digital media. May be repeated for maximum of 24 units. Letter grading.

C285A. Role of Producer in Professional Theater. (2) Lecture, three hours. Designed for graduate students. Study of strategies of production managers for economic and artistic decision-making processes in professional theater of America. Concurrently scheduled with course C185A. S/U or letter grading.

C286A. Role of Manager in Educational and Community Theater. (2) Lecture, three hours. Designed for graduate students. Study of artistic, social, and economic criteria in administration of educational and community theater. Concurrently scheduled with course C185B. S/U or letter grading.

C298A-298B. Special Studies in Theater Arts. (2 or 4 each) Lecture/discussion, two or four hours. Designed for graduate students. Seminar study of problems in theater arts, organized on topic basis. Each course may be repeated once for credit. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice position with professional theatre, director, or teacher. May be repeated once for credit. S/U or letter grading.

C404E. History of Design Décor Part I: Architecture and Decor—Antiquity to Early Neoclassical. (4) Lecture, four hours. Requisites: courses 14A, 14B, 14C. Study of pre-Renaissance and interior decor as manifestation of cultural, economic, and political influences to provide historical framework for design of scenery, costumes, and lighting for theater, film, and television. May be repeated once for credit. Concurrently scheduled with course C104E. Letter grading.

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C404H. History of Design for Performance Production Part II: Historic Costume from Neoclassical to 21st Century. (4) Lecture, four hours. Requisites: courses 14A, 14B, 14C. Study of historic costume as manifestation of cultural, social, economic, and political influences to provide historical framework for design of costumes for theater, film, and television. Survey of history of Western costume and civilian attire with global emphasis. Concurrently scheduled with course C1404H. Letter grading.


240A. (4 to 8) Studio, six to 18 hours. Development of internal technique, beginning with auto-drama that is dramatization of one’s personal history. Scene work follows, with emphasis on off-stage preparations, improvisations capturing circumstances, life of character, and intentions of scene. Letter grading.

240B. (4) Studio, six to 18 hours. Scene work, usually from 20 to 30 minutes in length. Continuation of work on off-stage preparations. Further development of how actor goes about doing research and fieldwork on character being played. Letter grading.

240C. (4) Studio, six to 18 hours. Development of external technique and of skills in improvisation, physical humor, delivery of lines, rhythm, timing, and public cabaret. Use of internal, use of action and objective with external letter. Letter grading.

241A-421B-421C. Advanced Acting II. (4 to 8 each) Studio/laboratory, six to 18 hours. Letter grading.

421B. Continued character behavior study through language and movement. Further work on actions, objectives, and researching role. 421C. Comedy workshop. Exploration of craft of comedy and development of cabaret pieces.

422. Advanced Acting for Theater, Film, and Television. (8 to 12) Studio/laboratory, eight to 12 hours. Intensive performance experience. May be repeated for maximum of 24 units. Letter grading.


424D-424E-424F. Advanced Voice and Speech II. (2 or 4 each) Studio/laboratory, three to six hours. Advanced voice problems. Extension of first-year work, with increased demands on voice. Range, resonance, and breathing capacity extension. Articulation and phonetic alphabet. Text work in classical verse. Letter grading.

424G-424H-424I. Advanced Voice and Speech III. (2 or 4 each) Studio, three to six hours. Extension of second-year work, with increased demands on voice, speech, range, resonance, and breathing capacity extension. Articulation and phonetic alphabet. Text work in classical verse. Letter grading.

425A-425B-425C. Advanced Movement I. (2 or 4 each) Studio/laboratory, three to six hours. Discovery of body’s unique language through exercises designed to explore and free total instrument. Development of flexible and strong body, and confidence physically. Awakening of imagination while exploring worlds of ritual, animal, conceptual, and modern dance movements. Letter grading.

425D-425E-425F. Advanced Movement II. (2 or 4 each) Studio/laboratory, three to six hours. Presentation of more complete picture of stage movement and its relationship to theater, music, and dance. Advancement of physical training of individual actors to their maximum potential. Experience in techniques and discovery of origins of variety of acrobatic and dance disciplines, including ballet, ballet, period dance, period dance, and circus techniques. Letter grading.

426A-426B-426C. Alexander Techniques. (2 or 4 each) Studio, three to six hours. Study and practice in Alexander techniques as method of developing balance and alignment of body and mind. Exploration of use of rhythm to expand movement potential of actors and relevant use of visual arts and animal studies to character development and to expansion of physicality. Letter grading.

429. Performance Workshop. (2) Studio, four hours. Limited to graduate students not enrolled in MFA acting program. Exercises in performance techniques, including autodrama and scene study. Development of performance skills through scene study, use of self, and personalization. Examination of characterization exercises and their application to scenes. Letter grading.

430A-430B-430C. Advanced Studies in Playwriting. (4 to 8 each) Lecture, three hours. Limited to MFA playwriting program students. Guided completion of full-length scripts for stage. S/U or letter grading.

431. Special Topics in Playwriting. (4) Discussion, three hours. Designed for MFA playwriting program students. Analysis and practice of varied aspects of playwright’s art. Variable content selected from topics such as International Phonetic Alphabet, and various response workshops. Letter grading.

433A-C433B-C433C. Script Development Workshops. (4 to 8 each) Lecture, three hours; studio, four to 24 hours. Designed for graduate students. Guided process of script development, with emphasis on communication, artistic growth, and professional preparation. Each course may be repeated for maximum of 8 units. Concurrently scheduled with courses C133A-C133B-C133C. Letter grading.


440B. Advanced Programming for Entertainment Design. (4) Studio, three hours. Study and practice in object-based programming using MAX/MSP programming language to control sound and video. May be repeated once for credit. Concurrently scheduled with course C1404B. Letter grading.


441A-441B-441C. Lighting Design. (4-4-4) Lecture/studio, four hours. Letter grading.

441A. (4) Lecture/studio, four hours. Study and practice in lighting designers, emphasizing textual and character analysis from lighting designer’s perspective, conceptual development with director, effect of light on dynamics of staging, use of color in light, and relationships of lighting designer to actor. May be repeated once for credit. Letter grading.

441B. (4) Lecture/studio, four hours. Study of use of light and color to define space, effect of light on scenery and costuming, lighting for arena/thrust theaters, multisensic productions, lighting patterns, and moving scenery. May be repeated once for credit. Letter grading.

441C. (4) Lecture/studio, four hours. Investigation of lighting design in production, musical theater, opera, touring, and repertory situations. Study of analysis of script and score for lighting designer. May be repeated once for credit. Letter grading.

441D. Scenic Projection and Media Techniques. (4) Lecture/laboratory, four hours. Designed for graduate students. Advanced study and practice in scenic projection and media techniques, with emphasis on analysis, design, and execution of theatrical projection and photographic technique for stage. S/U or letter grading.

442A-442B-442C. Costume Design. (4-4-4) Lecture/studio, four hours. Advanced study and practice in costume design for theater. Imaginative as impetus for design, text analysis, metaphor, and conceptualization. Investigation of design research process, peer review of concept and visual presentation of design. Study of costume design for theatrical productions, ballet, opera, and musical theatre. Each course may be repeated once for credit. Letter grading.

443A-443D. Advanced Scenic Design. (4 each) Formerly numbered 443A. Studio, four hours. Advanced study and practice of scenic design for the theater, with emphasis on critical thinking and imagination as impetus for design, text analysis, metaphor, and conceptualization. Investigation of design research process, composition, and style leading to visual presentation of design, as well as exploration of students’ individual cognitive and artistic process and refinement of techniques. Each course may be repeated twice for credit. S/U or letter grading.
C444A-C444B-C444C. Advanced Sound Design. (4-4-4) Lecture, four hours; laboratory, four hours. Concurrently scheduled with courses C144A-C144B-C144C. Letter grading.

C444A. (4) Lecture, four hours; laboratory, four hours. Study of sound and acoustics as they relate to performance environments, techniques associated with recording, mixing, processing, automation, and reproduction of dialogue, effects, and music tracks for theater sound design. May be repeated once for credit. Letter grading.

C444B. (4) Lecture, four hours; laboratory, four hours. Advanced study and practice in preparation and recording of theater sound designs, with emphasis on analysis, design, conceptual development of design, and multitrack recording techniques to realize design. May be repeated once for credit. Letter grading.

C444C. (4) Lecture, four hours; laboratory, four hours. Study and practice in processing and mixing of live and recorded sound; mix-down of multitrack recordings; preparation of sound tracks and sound reinforcement in theater. Study of creation of sound effects for live and virtual characters in film, television, and entertainment media, including effect of differing media on design choices, role of production designers and art directors in the design and production of live and single-camera production. Each course may be repeated once for credit. Letter grading.

C446A-C446B-C446C. Art and Process of Entertainment Design. (4-4-4 to 8) Lecture. Conceptualization, design, and prototyping of interactive theatrical events. Concurrently scheduled with courses C146A-C146B-C146C. Letter grading.

C446A. (4) Lecture, three hours. Exploration of original forms of media-rich entertainment experience through lectures, presentations, and seminar participation. Students form collaborative teams to conceive and propose interactive entertainment events. Letter grading.

C446B. (4) Lecture, three hours. Prototype development; two to five proposals to be more completely defined and developed. Students form collaborative teams for further conceptual development of their proposal proposals. May be repeated once for credit. Letter grading.

C446C. (4 to 8) Lecture, three to six hours. Prototype development; conceptual refinement and technological research of project; development of elaborate proposals containing storyboards, budgets, and models or may involve production of short performances demonstrating entertainment potential of concepts or prototypes. May be repeated once for credit. Letter grading.

C448A-C448B-C448C. Costume Design for Film, Television, and Entertainment Media. (4-4-4) Lecture/studio, four hours. Study and practice in design of scenic environment for film, video, and entertainment media, including effect of differing media on design choices, role of production designers and art directors in the design and production of live and single-camera production. May be repeated once for credit. Letter grading.

C453A. Costume Design. (4) Lecture/studio, four hours. Imagination as impetus for design, text analysis, metaphor, and conceptualization. Investigation of design research process, composition, and style leading to visual presentation of design. May be repeated once for credit. Concurrently scheduled with course C153A. Letter grading.

C453B. Costume Design for Theater. (4) Lecture/studio, four hours. Study of costume design for proscenium, thrust, and arena configurations, music theater, and concert lighting. May be repeated once for credit. Concurrently scheduled with course C153B. Letter grading.


C453D. Projects in Costume Design Management. (4) Lecture, three hours. Examination of professional duties of costume designers, set commissioners, and supervisors, especially management of production logistics, including but not limited to costume breakdowns, casting, delivery of materials and overseeing them, as well as set commissioner training for film and television, including effect of differing media on design choices. May be repeated twice for credit. Concurrently scheduled with course C153D. Letter grading.

C453E. History of Costume Design in Movies. (5) Lecture, three hours; screenings, three hours. History of costume design within context of 20th-century fashion and film history, including evolution of role of costume designer since early days of film industry. Role of costume designer and contribution of costume design to cinematic storytelling. Concurrently scheduled with course C153E. Letter grading.

C453F. Practice of Costume Design for Film Productions. (4) Lecture, three hours. Introduction to costume design as tool for storytelling, exploring integration of costume design and filmmaking process and what it takes to bring characters to life. Skills required to effectively build and define films, including script breakdown, collaboration with directors and actors, and how to manage production challenges. Concurrently scheduled with course C153F. Letter grading.

C454A. Sound Design. (4) Lecture/studio, four hours. Introduction to sound and audio in acoustic, audio, and digital domain. Study and practice of techniques for recording, editing, and sound manipulation. May be repeated once for credit. Concurrently scheduled with course C154A. Letter grading.

C454B. Sound Design for Theater. (4) Lecture/studio, four hours. Exploration of sound design for theater and techniques for mixing, reinforcement, and signal processing. Topics include use of delay, equalization, and microphone placement for theater sound reinforcement. Study of creation of sound effects, control of MIDI data, and design techniques for musical theater. May be repeated once for credit. Concurrently scheduled with course C154B. Letter grading.

C454C. Sound for Film and Television. (4) Lecture, four hours. Study of professional sound recording, re-recording, mixing, and synchronization practices for film and television. Concurrently scheduled with course C154C. Graduate students expected to produce productions demonstrating higher level of proficiency and skill. Letter grading.

C455A-C455H. Graphic Representation of Design. (2 each) Studio, concurrently scheduled with courses C155A-C155H. Letter grading.

C455A. Perspective Drawing. (2) Studio, four hours. Requisite: course 147A or 147B. Introduction to use of pencil and pen to communicate scenic designs, including one- and two-point perspective, form, light, shade, and textures. Graduate students expected to produce drawings demonstrating higher level of proficiency and skill. Letter grading.

C455B. Multimedia Rendering. (2) Studio, four hours. Study and practice of multimedia rendering techniques as they relate to interpretation of scenic, lighting, and costume renderings, with focus on human form in space. Weekly demonstrations of wide variety of art media, including watercolor, markers, pastel, and collage rendering. May be repeated twice for credit. Letter grading.

C455C. Digital Rendering. (2) Studio, four hours. Study and practice in rendering costumes, lighting, and scenic elements with combination of hand and computer rendering techniques. Emphasis of rendering from life, enhancing final rendering with variety of computer-assisted formats to create polished sophisticated presentations for theater, film, and television productions. May be repeated twice for credit. Letter grading.

C455D. Model Making. (2) Studio, four hours. Requisite: course 147A or 147B. Study of model for representation of scenic designs from initial working prototypes to finished color models. Use of wide variety of materials and techniques for execution of model. Graduate students expected to produce models demonstrating higher level of proficiency and skill. Letter grading.

C455E. Life Drawing. (2) Studio, four hours. Requisite: course 147A or 147B. Study and practice in drawing of human form. Letter grading.

C455F. Costume Rendering. (2) Studio, four hours. Requisite: course 147A or 147B. Study of techniques for rendering theatrical costumes, with emphasis on figure, clothing, and fabrics. Letter grading.

C455G. Scene Painting Techniques. (2) Studio, four hours. Requisite: course 147A or 147B. Study of scenic painting techniques and materials and their realization of color design and elevations. May be repeated once for credit. Letter grading.
C459H. Selected Topics in Graphic Representation of Design. (2) Studio, six hours. Group study of selected subjects in techniques for interpretation of design for theater. May be repeated once for credit. Letter grading.


C456D. Introduction to Computer-Assisted Drafting. (4) Studio, four hours. Requires: course 147A. Investigation of drafting techniques for scenic and lighting designs using AutoCAD. Concurrently scheduled with course C156D. Letter grading.


C459A-495B-495C. Practicum and Practice in Teaching Theater. (2-2-2) Seminar, to be arranged; discussion, two hours. Limited to PhD students. Study and practice of teaching theater at university level. Orientation and preparation of graduate students who have responsibility to assist in teaching undergraduate courses in department. Discussion of problems common to teaching experience. Letter grading.

C467. Professional Internship in Theater, Film, and Television. (4, 8, or 12) Tutorial, to be arranged. Full- or part-time at studio or on professional project. Designed for advanced MFA students. Internship at various public, educational, or professional facilities. Concurrently scheduled with course C158C. Letter grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate advisor and graduate dean, and host campus advisor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

504A. Directed Individual Studies: Research. (2 to 12) Tutorial, to be arranged. Designed for graduate students. May be repeated with consent of instructor. S/U or letter grading.

505A. Directed Individual Studies: Writing. (2 to 12) Tutorial, to be arranged. Designed for graduate students. May be repeated with consent of instructor. S/U or letter grading.

506. Directed Individual Studies: Design. (2 to 12) Tutorial, to be arranged. Designed for graduate students. May be repeated with consent of instructor. S/U or letter grading.

506A. Directed Individual Studies: Design. (2 to 12) Tutorial, to be arranged. Designed for graduate students. May be repeated with consent of instructor. S/U or letter grading.

506B. Directed Individual Studies: Writing. (2 to 12) Tutorial, to be arranged. Designed for graduate students. May be repeated with consent of instructor. S/U or letter grading.

506C. Directed Individual Studies: Directing. (2 to 12) Tutorial, to be arranged. Designed for graduate students. May be repeated with consent of instructor. S/U or letter grading.

506D. Directed Individual Studies: Design. (2 to 12) Tutorial, to be arranged. Designed for graduate students. May be repeated with consent of instructor. S/U or letter grading.

507. Preparation for PhD Qualifying Examinations in Theater Arts. (2 to 12) Tutorial, to be arranged. Writing of prospectus and three reading lists. May be repeated for credit. S/U grading.


C459A-495B-495C. Practicum and Practice in Teaching Theater. (2-2-2) Seminar, to be arranged; discussion, two hours. Limited to PhD students. Study and practice of teaching theater at university level. Orientation and preparation of graduate students who have responsibility to assist in teaching undergraduate courses in department. Discussion of problems common to teaching experience. Letter grading.

C467. Professional Internship in Theater, Film, and Television. (4, 8, or 12) Tutorial, to be arranged. Full- or part-time at studio or on professional project. Designed for advanced MFA students. Internship at various public, educational, or professional facilities. Concurrently scheduled with course C158C. Letter grading.

University Studies

College of Letters and Science

A316 Murphy Hall
Box 951430
Los Angeles, CA 90095-1430
310-206-1697
http://www.uci.edu/department/arts

Muriel C. McClendon, PhD, Chair
Faculty Committee

Robert A. Gurval, PhD (Classics)
Frank A. Laski, PhD (Molecular, Cell, and Developmental Biology)
Elizabeth A. Marchant, PhD (Comparative Literature, Gender Studies)
Muriel C. McClendon, PhD (History)
William I. Newman, PhD (Earth, Planetary, and Space Sciences; Mathematics; Physics and Astronomy)
Scope and Objectives
Available to all undergraduate students, the university studies curriculum seeks to promote academic success and facilitate the transition of new students as they enter UCLA. Courses are tailored to specific undergraduate populations and are designed to introduce students to the research university and academic culture of UCLA. Beyond addressing themes of academic success, the courses also introduce students to the unique opportunities and experiences available at a large research university. For more information, contact Marian Gabra or David Maldonado.

University Studies
Lower-Division Courses
10. ACE UCLA | Critical Strategies to Achieve Undergraduate Excellence. (2) Seminar, two hours. Designed primarily for new students to help them understand UCLA, its culture, structure, and academic policies and to facilitate their transition from high school to college. Examination of research on first-year experience of college students, studying at UCLA versus high school, policies and procedures, and campus resources. P/NP grading.

20. ACE UCLA | Critical Strategies to Achieve Undergraduate Excellence for International Students. (2) Seminar, two hours. Designed to help first-year international students make successful transition to UCLA and to life as college students in U.S. Examination of research on transition of international students to college in U.S., adjustment to life in U.S., policies and procedures, and campus resources. P/NP grading.

30. How to Succeed at UCLA: Retention. (2) Seminar, two hours. Limited to students in Bruin Readmission Program. Designed to provide students who are working toward readmission critical understanding of how they and others arrive at their dismissal status and steps they can take that lead to academic success in future. Examination of research on retention of international students to college in U.S., adjustment to life in U.S., policies and procedures, and campus resources. P/NP grading.

Undergraduate Study
Urban and Regional Studies Minor
The scale, diversity, balkanized governance, and natural environment of Southern California all contribute to making it an extraordinary natural laboratory for learning about urban and regional issues, whether the focus is on immigration, employment, the built environment, transportation, poverty, natural resources, or a host of other challenges. The Urban and Regional Studies minor offers undergraduate students a means to address some of these issues from an interdisciplinary perspective, giving a balanced mixture of theory, practice, and service learning courses.

To enter the minor, students must be in good academic standing with an overall grade-point average of 2.0 or better, have completed 90 or more units, and complete either Urban Planning 120 or 121 with a grade of C or better. An introductory course in geography, political science, or sociology is recommended. For further information, contact the program director/counselor.

Required Courses (28 units): (1) Urban Planning 120 or 121 with a grade of C or better; (2) five elective courses selected as follows: (a) at least three courses from Public Policy 10A, 104, C115, M120, C147, Urban Planning 120 (unless taken under item 1), 121 (unless taken under item 1), 130, C133, 141, M150, M160, M165, M175, C184 and (b) up to two courses from Anthropology 146, Chicana and Chicano Studies 181, Geography 150, History 145A, 145B, Management 175, Sociology 158 (students may petition to include a Luskin School of Public Affairs course not listed above to fulfill an elective requirement); (3) capstone project that may be satisfied by one of the following: (a) Urban Planning 185SL—service learning project or (b) Urban Planning 199 or a 199 in the College of Letters and Science with a faculty mentor affiliated with this minor—individual research project.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of Urban Planning offers the Master of Urban and Regional Planning (MURP) degree and the Doctor of Philosophy...
Urban Planning

Upper-Division Courses

M110. Inequality and Democracy: Analysis and Praxis of Public Problems. (4) (Same as Social Welfare M110.) Lecture, three hours; discussion, one hour. Analysis and praxis of public problems. Taking up case of persistent inequality in liberal democracies, coverage of key frameworks and methodologies for understanding and analyzing poverty and inequality and examination of forms of action, from role of government to social movements, that seek to intervene in such problems. Study of problems, programs, policies, and politics in globally interconnected, transnational world, while avoiding analytical divide between global north and global south. Letter grading.

M120. Introduction to Cities and Planning. (4) Lecture, three hours. Survey of urban history and evolution in U.S., urban social theory, current growth trends, system of cities, urban economy and economic restructuring, traditional and alternative location theories, urban transportation, and residential location and segregation. P/NP or letter grading.

M121. Urban Policy and Planning. (4) Lecture, three hours. Examination of current urban planning and policy issues. Focus on connecting theoretical theories of good urban form, metropolitan organization and governance, economic development and growth management, edge cities, spatial mismatch hypothesis, urban poverty, racial/ethnic inequality, gender and urban structure, sustainability, and future of cities. P/NP or letter grading.

M122. Policy, Planning, and Community. (4) (Same as Asian American Studies M108.) Lecture, three hours; field trips. Examination of specific planning/policy subfield, such as housing and economic development, environmental inequality, gender and urban structure, sustainability, and future of cities. P/NP or letter grading.

129. Special Topics in Urban Policy and Research. (4) Lecture, three hours. Examination of particular planning/policy subfield (e.g., economic development, environment, housing, urban form), conceptual theoretical and practical methodologies and approaches of urban economic development, international planning and development, land use, or urban design) in some depth. Specific topic area rotates depending on instructor. May be repeated for credit with topic change. P/NP or letter grading.

130. Fundamentals of Urban and Regional Economics. (4) Lecture, three hours. Preparation: one introduction to microeconomics course. Most U.S. population lives in urban areas; world’s population is becoming more urbanized with each passing decade. National, state, and local governments are engaged in managing, planning, policy making, and governance in urban context. Ultimate efficacy of those public activities can be enhanced by understanding of economic forces acting on urban areas. Basic concepts related to location choice, agglomeration, and core–periphery, urbanization, and functional urbanization by cities and transportation. P/NP or letter grading.

C133. Political Economy of Urbanization. (4) Lecture, three hours. Introduction to new approaches to urban studies, basic concepts and analytical approaches of urban political economy, with major emphasis on American urban problems and restructuring of modern metropolis. Topics include historical geography of urbanization, development and transformation of urban spatial structure, suburbanization and metropolitan political fragmentation, urban fiscal movements, and role of urban social movements. Concurrently scheduled with course C233. P/NP or letter grading.

CM137. Southern California Regional Economy. (4) (Same as Laboratory M135 and Public Policy M149.) Lecture, three hours. An introduction to regional economy, with emphasis on Los Angeles. Key economic sectors, labor market composition, and review of conflicting portrayals depicting dynamics of region. Two all-day bus tours of key regional economic and guest lectures by regional experts included. Concurrently scheduled with course C235. Lecture grading.

M140. Issues in Latina/Latino Poverty. (4) (Same as Chicana and Chicano and Latinx and Workplace Studies M121.) Lecture, four hours. Examination of nature and extent of urban and rural poverty confronting Latina/Latino population in U.S. Special emphasis on antipoverty policies of government and nonprofit organizations and social planning and economic development strategies. Attention also to literature on underclass. Letter grading.

141. Planning with Minority Communities. (4) Lecture, three hours. Focus on understanding historical theory, history, and contemporary issues that affect low-income communities, communities of color, and underserved neighborhoods, particularly in Los Angeles area. Field of planning offers distinct perspectives and opportunities for improving vulnerable communities. Topics range from discussion of intersection between race and income, critical race theory, community development, and social marketing strategies, to applications of environmental justice to social justice. P/NP or letter grading.

M150. Transportation Geography. (4) (Same as Geography M149.) Lecture, three hours. Designed for juniors/seniors. Study of geographical aspects of transportation, with focus on characteristics and functions of various modes and on complexities of intra-urban transport. P/NP or letter grading.

151. Urban Transportation Economics. (4) Lecture, three hours. Big cities offer many attractions, but high density also produces traffic congestion and air pollution. Can we have dense urban areas without congested traffic and polluted air? Analysis of economic explanations for transportation problems and examination of possible solutions. Because university campuses resemble small cities, they are used as examples to explore various policies (such as BrinGo! at UCLA) that universities have adopted to improve transportation. Letter grading.

M160. Environmental Politics and Governance. (4) (Same as Global Studies M149.) Lecture, three hours. Environmental planning is more than simply finding problems and fixing them. Each policy must be negotiated and implemented within multiple, complex systems of governance. Institutions and politics matter deeply in how environmental governance works in practice and how it might be improved. Letter grading.

M163. California Sustainable Development: Economic Perspective. (4) (Same as Environment M135 and Public Policy M149.) Lecture, three hours. Examination of specific environmental challenges that California faces. Microeconomic perspective used, with special emphasis on economic strategies to reduce their pollution and incentives of local, federal, and state government to address these issues. Focus on measurement and empirical hypothesis testing. P/NP or letter grading.

M164A. Documentary Production for Social Change: Mobility in Los Angeles. (5) (Same as Disability Studies M164A.) Seminar, three hours; fieldwork, two hours. Exploration of documentary filmmaking as a catalytic force for raising awareness about American commute in Los Angeles as case study. Introduction to issues of race, ethnicity, gender, disability, and class on experiences of commuting, access to public transportation, and walk versus drive (pivots and pedestrian) forms of commuting. Exposure to observational, interview-based, and participatory documentary shooting and editing techniques, as well as social marketing strategies that are vital to documentary production and distribution. Letter grading.

M165. Environmentalism: Past, Present, and Future. (4) (Same as Environment M132 and Geography M115.) Lecture, three hours; discussion, one hour. Examination of history and origin of major environmental ideas, movements or counter-movements they spawned, and new and changing nature of modern environmentalism. Introduction to early ideas of environmentalism, how rise of modern sciences reshaped environmental thought, and how this was later transformed into 19th-century ideas and rise of American conservation movements. Review of politics of American environmental thought and contemporary environmental questions as they bear on broader set of questions about nature of development, sustainability, and equity in environmental debate. Exploration of issues in broad context, including global climate change, rise of pandemics, deforestation, and environmental justice impacts of war. Letter grading.


M167. Environmental Justice through Multiple Lenses. (4) (Same as Environment M167.) Lecture, three hours. Examination of protection of race, economic class, and environment in U.S., with focus on issues related to social justice. Because environmental inequality is highly complex phenomenon, multidisciplinary and multipopulation approach taken, using alternative ways of understanding, interpreting, and taking action. P/NP or letter grading.

M171. Planning Issues in Latina/Latino Communities. (4) (Same as Chicana and Chicano and Latinx and Workplace Studies M122 and Labor and Workplace Studies M122.) Lecture, four hours. Exploration of socioeconomic, demographic, and political forces that shape low-income communities and analysis of planning intervention strategies. Emphasis on community and economic development and environmental equity. Letter grading.

CM172. Labor and Economic Development. (4) (Same as Labor and Workplace Studies M171.) Lecture, three hours. Exploration of economic development and identification of ways that labor and labor unions indirectly and directly influence and shape economic development. View of labor that labor plays, and could play, in promoting and supporting economic development for all. Concurrently scheduled with course C271B. Letter grading.

M175. Women and Cities. (4) (Same as Gender Studies M175.) Lecture, three hours. Examination of relationship between women and cities: (1) how cities have affected women's opportunities for economic and social equality, (2) women's contributions to development of U.S. cities, and (3) contemporary strategies and efforts to create urban environments that reflect women's needs and interests. P/NP or letter grading.

C184. Looking at Los Angeles. (4) Lecture, three hours; fieldwork, three hours. Examination of key issues of Los Angeles, with emphasis on understanding social, economic, and political issues in development of Los Angeles. Concurrently scheduled with course C284. Letter grading.

185SL. Community-Based Research in Planning. (4) Seminar, one hour; fieldwork, three hours. Preparation: at least four Urban and Regional Studies minor courses, which at least include subject area of service learning setting. Limited to junior/senior minor students. Designed to serve as complement to service learning requirement and may be used to fulfill capstone requirement for minor. Students are matched to public, private, or nonprofit agency through Center for Community Learning and must complete minimum of 30 hours of work. Duties and responsibilities to be determined by sponsoring organizations. Readings to be determined in consultation with instructor. P/NP grading.

195. Community Internships in Urban Planning. (4) (Same as Architecture M201.) Lecture, three hours. Exploration of conceptual and historical structures that shape current issues in architectural theory. Readings in primary texts serve as framework for understanding nature and evolution of major architecture. Letter grading.


197. Urban Planning and Community Development. (4) (Same as Architecture M201.) Seminar, four hours. Development of understanding of major elements of urban planning theory and practice. Letter grading.

198. Urban Planning and Community Development. (4) (Same as Architecture M201.) Seminar, two hours; studio, one hour. Presentation of basic case studies and examination of urban planning project. Preparation of poster and presentation of findings. Letter grading.

202A-202B. Land Use. (202A: 3 or 4/202B: 1 or 2) Lecture, three hours. Course 202A is required for students majoring in urban planning. Course 202B is for students majoring in urban and regional planning. Lecture, three hours; laboratory, one hour. Preparation: one-semester statistics course and familiarity with one packaged statistics program. Topics of Geographic Information Systems (GIS) and applied techniques of using spatial data for mapping and analysis. Topics include cartographic techniques, spatial analysis, and information systems. Use of mapping and spatial analysis to address planning problem. Letter grading.

203. Housing Segregation, Housing Discrimination, and Evolution of Public Policy. (1 to 8) (Same as Law M256.) Seminar, three hours; two field trips. Consideration of selected aspects of housing and public policy, including current federal and state housing subsidies; remedies of housing consumers; impacts of market discrimination against children, racial minorities, and women; and local governmental laws influencing cost and supply, such as antisegregation and rent control. Letter grading.

203A-203B. Seminar: Housing Segregation, Housing Discrimination, and Evolution of Public Policy. (1 to 8) (Same as Law M256.) Seminar, three hours; two field trips. Course 203A is required for students majoring in urban planning. Course 203B is for students majoring in urban and regional planning. Seminar, three hours; two field trips. Preparation: passing score on microeconomics examination given first day of class. Practical use of economics in analyzing public resource allocation problems. Topics include microeconomic models of inter- and intramarginal analysis, difference between equity and efficiency, public goods and public funder problem, environmental protection, public service pricing, and conflicts between individual and collective rationality. Letter grading.

204. Law of Urban Planning. (4) Course 204 or equivalent. Lecture, three hours. Course 204 is enforced as a prerequisite to 205A. Emphasis on law and policy affecting urban and regional planning. Letter grading.

205A. Theories of Architecture. (4) (Same as Architecture M201.) Lecture, three hours. Examination of architectural theories that shape current issues in architectural theory. Readings in primary texts serve as framework for understanding nature and evolution of major architectural theories. Letter grading.

205B. Advanced Theories of Architecture. (4) (Same as Architecture M201.) Lecture, three hours; laboratory, one hour. Preparation: one-semester statistics course, familiarity with one packaged statistics program. Advanced topics in architectural theories and methodologies of architectural research. Letter grading.
222A. Introduction to Planning History and Theory. (4) Lecture, three hours. Introduction to and evaluation of theories and critical re-
quired of first-year MURP students, typically in Fall Quarter; required of first-year PhD students who have not completed comparable graduate course in plan-
ing history and theory. Exploration of planning thought and practice over time, leading authors and key issues in field of planning, traditional and insur-
gent histories of planning, and alternative approaches to planning for multiple and pluralistic publics. Letter grading.

222B–222C. Advanced Planning Theory and Histo-
ry II, (4–6) Lecture, three hours. Required of first-
year PhD students. Major ideas and theories of plan-
ing that have influenced its development from early-
19th century to present. Letter grading.

228. Visual Communication Skills. (2) Five-week course. Lecture, two hours; laboratory, one hour. Greater emphasis on graphic presentation and visual communication. Students create visual communication projects to advocate for, and encourage participation in planning process in recent years, in both public and private sector. Visual communication requires analytic skills and strategic thinking, strong foundation in design theory, and technical skills in computer programs. Introduction to Adobe InDesign and Illustrator and foun-
dation in design theory and communication. How to use graphic design and presentation programs (i.e., Adobe InDesign, Adobe Illustrator, GIS, PowerPoint) to create attractive and powerful planning materials and reports, design principles to communicate ideas in clear, succinct, and engaging manner, and when and how to use graphic materials to support verbal presentations or written reports. Letter grading.

229. Special Topics in Planning Methods. (4) Lecture, three hours. Topics in planning methodology select by faculty members. May be repeated for credit. S/U or letter grading.

230. Introduction to Regional Planning. (4) (Same as Public Policy M241.) Lecture, three hours. Critical and historical survey of evolution of regional planning theory and practice, with particular emphasis on rel-
tions between regional planning and developments within Western social and political philosophy. Major conceptions in regionalism and its effects on political and economic systems of the world. Letter grading.

232. Disaster Management and Response. (4) Lecture, three hours. Through readings and presenta-
tions, examine the management and respon-
ses in both U.S. and developing countries. Explo-
ration of how disaster impacts and risk reduction both to the environment, vulnerability, and political factors, in addition to acts of nature. Structured to allow stu-
dents to focus on distinct disaster contexts and themes as set out in reading and weekly sessions. Letter grading.

233. Political Economy of Urbanization. (4) Lecture, three hours. Introduction to new approaches to urban studies, basic concepts and analytical ap-
proaches of urban political economy, with major em-
phasis on understanding the challenges and restructuring of modern metropolis. Topics include historical geog-
raphy of urbanization, development and transforma-
tion of urban spatial structure, suburbanization and metropolization, urban crisis, and role of urban social movements. Concu-
rrently scheduled with course C133. S/U or letter grading.

234A. Development Theory. (4) (Same as Geog-
raphy M234.) Lecture, three hours. Theories of basic literature and schools of thought on development theory through analysis of impact of mercantilism, con-
loialism, capitalism, and socialism on various urban and rural social and economic structures in Third World. Presentation, through evaluation of theoretical writings and case studies, of complexity and diversity of developing countries. Emphasis on linkages between policy and rural and urban impacts. Gives stu-
dents important background for courses M234B, M234C, and many other planning courses addressing Third World issues. Letter grading.

234B. Ecological Issues in Planning. (4) (Same as Geography M239B.) Lecture, three hours. Recomm-
ded preparation: course M234B. Scientific and polit-
ics of modern environmentalism and planning in light of transformations inherent in global change, in-
cluding how to address these questions in ways that go beyond consumerism and bifurcation of wild, ecological, and human environments. American environmentalism has become dominant model for many conservation practices. Informed by Marxist model of society for political ecology and Marxian analysis of new forms of industrialization, intensified global com-
petition, and interrelationships among capital, labor, and state. Letter grading.

237C. Southern California Regional Economy. (4) Lecture, three hours. Examination of regional economic, with emphasis on Los Angeles. Key eco-

nomic sectors, labor market composition, and review of conflicting portrayals depicting dynamics of region. Two all-day bus tours of key economic regions and guest lectures by regional experts included. Concur-
rency scheduled with course OM137. Letter grading.

238. Global Labor Markets. (4) Lecture, three hours. Consideration of labor-related programs, policy, and strat-
ings in international and comparative context. Review of major approaches to improving quality, quan-
tity, and access to jobs, including training, regulation, migration policy, organizing strategies, and social safety net. Global in scope, with particular reference to countries of global south. Letter grading.

239. Special Topics in Regional and International Development. (4) Seminar, three hours. Topics in urban and regional development selected by faculty members. May be repeated for credit. S/U or letter grading.

240. Local Government. (2 to 6) (Same as Law M285.) Lecture, three hours. Analysis of structure and functions of local, regional, and state government in historical and institutional context: organization, fi-
inance, intergovernmental relations, role of judiciary, public services, lawmaking, citizen participation through initiatives and referenda, and government tort liability. Letter grading.

241. Foundations of Social Welfare Policy. (4) (Same as Public Policy M260 and Social Welfare M221A.) Lecture, two hours; discussion, one hour. Nature, roles, and history of welfare institutions in differ-
tent societies; applicable social system theory of different components of welfare system; theory and research about welfare policies and organizational forms. S/U or letter grading.

242. Poverty and Inequality. (4) Lecture, three hours. Examination of relationship between urbanization and spatial inequality in U.S.—dynamics of urban growth, levels and causes of spatial inequality, and implications of spatial inequality for low-income com-
munities. Topics include concentrated poverty, resi-
dential segregation, immigrant neighborhoods, spatial disparities in access to opportunities, housing mar-
tet, neighborhood health and safety, infrastructure, and political cohesion and participation. Analysis of role of policies in promoting and/or redu-
sing spatial inequalities. Letter grading.

243. Privatization, Regulation, and Public Fi-
nance. (4) (Same as Public Policy M293.) Lecture, three hours; outside study, nine hours. Requisite: Public Policy 201. Evaluation of economic and polit-
cial determinants of trend toward privatizing public services, and equity and efficiency outcomes of this trend as expressed through new pricing, financing, and service-level policies. Exploration of new regula-
tory role this trend implies for state and local govern-
ments. Letter grading.

244. Urban Poverty and Planning. (4) Lecture, three hours. Examination of determinants of urban poverty, with emphasis on poverty in U.S. and on geographical dimensions of poverty and planning interventions that contribute to poverty reduction. Topics include rela-
tionship between poverty and human and social cap-
tal, demographic change, low-wage labor market, spatial inequality, altruism, and social policies. Social and political policy. Letter grading.

245. Urban Public Finance. (4) Lecture, three hours. Requisites: courses 207, 220A. Theory and prac-
tice of urban public finance, with emphasis on methods used to fund urban infrastructure. Topics include fiscal impact analysis of real estate development, ef-
fcts of taxes on land-use decisions, benefit assess-
ments to finance neighborhood public investment, provision and intergovernmental contracting as method of supplying urban public services, tax increment fi-
nance for urban redevelopment, and municipal bond market. S/U or letter grading.

247. Planning for Multiple Publics. (4) Lecture, three hours. Exploration of planning needs of various social groups in urban settings, using existing literature and research studies to determine appropriate mechanisms for policies, programs, and publics. Analysis of communities in Los Angeles metropolitan area to gain insights into practical, theoretical, and methodological problems common to multiple publics. Generally taken in first year. S/U or letter grading.


249. Special Topics in Transportation Policy and Planning. (4) Lecture, three hours. Topics in transportation policy and planning selected by faculty members. May be repeated for credit. S/U or letter grading.

M250. Transportation, Land Use, and Urban Form. (4) (Same as Public Policy M220.) Lecture, three hours. Historical evolution of urban form and transportation systems, intrametropolitan location theory, recent trends and projections into future, overview of transportation-related approaches to air quality, and energy issues, chemistry of air pollution, overview of transportation-related approaches to air quality enhancement; new car tailpipe standards; vehicle inspection and maintenance issues; transportation demand management and transportation control measures; alternative fuels and electric vehicles; corporate average fuel economy and global warming issues; growth of private fleet; automobile in sustainability debate. Letter grading.

257. Transportation and Economic Outcomes. (4) Lecture, three hours. Examination of equity issues related to urban transportation, with focus on complex relationships among urban transportation system, transportation (travel patterns and transportation investment), and economic outcomes. Role of transportation in improving economic outcomes for low-income and minority households and communities. Letter grading.

M258. Transportation and Environmental Issues. (4) (Same as Public Policy M223.) Lecture, three hours. Regulatory structure linking transportation, air quality, and energy issues, chemistry of air pollution, overview of transportation-related approaches to air quality enhancement; new car tailpipe standards; vehicle inspection and maintenance issues; transportation demand management and transportation control measures; alternative fuels and electric vehicles; corporate average fuel economy and global warming issues; growth of private fleet; automobile in sustainability debate. Letter grading.

260. Environmental Politics and Governance. (4) Lecture, three hours. Environmental planning is more than simply finding problems and fixing them. Each policy must be negotiated and implemented within multiple, complex systems of governance. Institutions and politics matter deeply. Overview of how environmental governance works in practice and how it might be improved. Letter grading.


260B. Green Urban Studio: Designing Living Neighborhoods. (4) Studio, three hours. Students gain first-hand knowledge of key established and emerging performance-based methods for addressing issues of energy, water, waste, food, transportation, habitat, biodiversity, and local economies at district or neighborhood scale. To date, affects quality of life and livelihoods both in California and across low and middle-income nations. Examination of similarities and distinctions between relevant water access issues in both contexts. To date, water resources planning has been devoted almost exclusively to engineering capacity and technical capability of service delivery systems. Focus here on social, political, and economic drivers of access, inequality of access, and the role of water access governance issues primarily considered at subnational, city, and household scales. S/U or letter grading.

M263. Introduction to Environmental Policy. (4) (Same as Public Policy M252.) Lecture, three hours. Introduction to basic concepts and methods of environmental analysis covering various topics with cross-disciplinary perspectives. Development of ability to analyze major environmental and resource issues as well as to read, discuss, and write critically about environmental policy. Letter grading.

264. Environmental Law. (4 or 6) Lecture, three hours. Field of environmental law through analysis of various legal issues and public policy: legal consequences of decision-making strategies and allocation of primary responsibility for various environmental decisions. Focus on air pollution and Clean Air Act as means of illustrating policy issues underlying field. Concurrently scheduled with Law 290. S/U or letter grading.

264A-264B. Environmental Law. (264A: 3 or 4/264B: 1 or 2) (Formerly numbered M264A.) Lecture, three hours. Course 264A is enforced requisite to 264B. Examination of field of environmental law through analysis of various legal issues and public policy: legal consequences of decision-making strategies and allocation of primary responsibility for various environmental decisions. Focus on air pollution and Clean Air Act as means of illustrating policy issues underlying field. Concurrently scheduled with Law 290. In Progress (264A) and S/U or letter (264B) grading.

M265. Environmentalisms. (4) (Same as Geography M265.) Lecture, three hours; discussion, one hour. Review of environmental theories and their practices in environmental and related fields. Issues of climate change, scenario planning, and matrix ecology and its implications in both urban and rural settings. Exploration of problematic of increasing internationalization (or international implications) of environmental practices as part of both green and black economies. What does integrated environmental planning look like in this century? Letter grading.


M267. Environmental and Resource Economics and Policy. (4) (Same as Public Policy CM250.) Lecture, three hours. Requisites: courses 207 and 202B, or Public Policy 204 and 208. Survey of ways economics is used to define, analyze, and resolve problems of environmental management. Overview of analytical questions addressed by environmental economists that bear on public policies. Letter grading.

M268. Policy Analysis of Emerging Environmental Technologies. (4) (Same as Public Policy M266.) Lecture, three hours. Acquisition and utilization of economic, finance, planning, and policy analytic tools needed to evaluate factors that drive market adoption from early-stage research to field-scale deployment. Roots of fossil, electric vehicle, and energy efficiency as focal examples, with emphasis on role of policy and planning incentives intended to spur adoption. Letter grading.

269. Special Topics in Environmental Analysis and Policy. (4) Lecture, three hours. Topics in environmental analysis and policy selected by faculty members. May be repeated for credit. S/U or letter grading.

M270. Homelessness: Housing and Social Service Issues. (4) (Same as Social Welfare M206A.) Lecture, 90 minutes; discussion, 90 minutes; one field trip. Review of current status of homelessness: who homeless are, what social services and housing are available, existing programs in architecture, management, and sources of funding. Outside speakers include providers of services to homeless. Letter grading.

271A. Community Economic Development. (4) ( Formerly numbered 271L.) Lecture, three hours. Introduction to fundamentals of community economic development and neighborhood development strategies. Overview of basic approaches, important concepts, resources and language of field, and major strategies for revitalization of low-income neighborhoods. Letter grading.

271B. Labor and Economic Development. (4) Lecture, three hours. Investigation of economic development and identification of ways that labor and labor unions directly and indirectly influence and shape economic development. Wide range of roles that labor plays, and how labor can play a role in labor economics. Focus on U.S. particular emphasis on low-wage, low-skill workers and marginalized groups, such as inner-city people of color and immigrants. Analyses of how labor markets operate in various contexts and national policy options for making them work better and range of solutions, including job creation, workforce training, job ladder creation, union and community organizing, and immigration reform. Letter grading.

278. More Jobs, Better Jobs: Work and Policy. (4) Lecture, three hours. Central issues in urban economic development is jobs—how to create them, how to help disadvantaged populations get access to them, and how to ensure that they are of adequate quality in terms of wages, advancement, and skill development. Examination of how urban labor markets work and what can be done to better, with focus on U.S. particular emphasis on low-wage, low-skill workers and marginalized groups, such as inner-city people of color and immigrants. Letter grading.

279. Seminar: Public Space. (4) Seminar, three hours. Examination of changes in production, consumption, design, public space, and analysis of socioeconomic, political, and cultural factors that lie behind them. Letter grading.

280. Affordable Housing Development. (4) Lecture, three hours. Requisites: courses 220A, 220B. Overview of basic concepts and skills utilized in nonprofit development initiatives, especially by community-based organizations. Focus on nonprofit provision of subsidized housing, emphasizing way professionals broker debt and equity funding from private, governmental, and philanthropic sources. User of client projects and negotiation exercises. S/U or letter grading.

281. Introduction to History of Built Environment in Los Angeles. (4) Lecture, three hours. Requisites: courses 220A, 220B. Open to advanced undergraduates with consent of instructor. Introduction to history of physical forms of development in Los Angeles, with emphasis on understanding social, economic, and political issues in development of Los Angeles metropolitan region. Concurrently scheduled with course C184. Letter grading.

282. Architecture, Management, and Nonprofit Organizations. (4) (Same as Architecture M247A.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Fundamental building blocks for successful management in nonprofit sector. Students develop management skills in strategic thinking problem solving, project management, team building, and negotiation. Use of case studies to troubleshoot critical challenges, from finance to crisis management to marketing, that nonprofit managers typically face. Letter grading.

285. Women and Community Development: Great Gender Debates. (4) Lecture, 90 minutes; discussion, 90 minutes. Relationship between planning, community development, and women, with attention to interaction of gender, race, and class/ethnicity. Examples from domestic and international development. Letter grading.

288. Leadership, Development, and Governance of Nonprofit Organizations. (4) (Same as Public Policy M227 and Social Welfare M290S.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Examination of how nonprofit sector emerges, especially as part of broader social movements and public interest organizations. Letter grading.

290. Management Strategies for Public and Nonprofit Organizations. (4) (Same as Public Policy M227 and Social Welfare M290S.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Development of management skills in strategic thinking problem solving, project management, team building, and negotiation. Use of case studies to troubleshoot critical challenges, from finance to crisis management to marketing, that nonprofit managers typically face. Letter grading.

292. Sprawl and Smart Growth. (4) Lecture, three hours. Suburbs are not new, but metropolitan areas in U.S. are increasingly spreading out. Discussion of causes and impacts of sprawl as it relates to smart growth. Letter grading.

293. Social Practice. (4) (Same as Architecture and Urban Design CM247A.) Lecture, three hours. Relationship of built environment to natural-
199. Directed Research in Urology. (2 to 8) Tutorial, four hours. May be repeated for credit. Individual contract required. P/NP or letter grading.

UROLOGY

David Geffen School of Medicine
379 Wasserman Building
Box 957383
Los Angeles, CA 90095-7383
310-794-8492
http://urology.ucla.edu

Mark S. Litwin, MD, MPH, FACS (Fran and Ray Stark Foundation Professor of Urology), Chair

Scope and Objectives
The fundamental goal of the Department of Urology is to teach medical students the general principles of diagnosis and management in diseases of the genitourinary tract. Urology encompasses a wide scope of human illness, including conditions that are congenital and acquired, pediatric and adult, male and female, malignant and benign. The department functions to acquaint students with the skills necessary to manage these conditions in the initial stages and over the long term.

Instruction spans all four years of the undergraduate medical school curriculum but is concentrated during the clinical rotations. Students spend two weeks on the urology service during the third year and may return for an additional three-week elective rotation during the fourth year. The clinical experience includes time spent in the faculty and resident clinics, on ward rounds, and in didactic conferences that cover general urology, urological subspecialties, uropathology, and uroradiology. Urology teaching settings include the Reagan UCLA, Harbor-UCLA, Olive View-UCLA, Santa Monica-UCLA, and West Los Angeles VA medical centers.

For more details on the Department of Urology and a listing of the courses offered, see the department website.

Urology
Upper-Division Course

Visual and Performing Arts Education

Interdisciplinary Minor
School of the Arts and Architecture

2101 Broad Art Center
Box 951620
Los Angeles, CA 90095-1620
310-794-4822
vapaes@arts.ucla.edu
http://vapaes.arts.ucla.edu

Angela S.-Y. Leung, MA, CMA, Chair

Faculty Committee
Lily Chen-Hatke, PhD (Music)
Perry M. Daniel, MFA (Theater)
David H. Gere, PhD (World Arts and Cultures/Dance)
Angelia S.-Y. Leung, MA, CMA (World Arts and Cultures/Dance)
Victoria E. Marks, BA (World Arts and Cultures/Dance)
Hirsch Perlman, BA (Art)
Karen H. Quartz, PhD (Education)

Scope and Objectives
The Visual and Performing Arts Education minor is an interdisciplinary and interdepartmental series of courses designed to (1) introduce students to the field of arts education for multiple publics in general and specifically in relationship to the K-12 public school system, (2) introduce students to the profession of the teaching artist and to a broad range of careers in the arts, including K-12 teaching, community arts education, museum education, creative arts therapies, and arts advocacy and to a variety of arts-related programs and cultural agencies, including community arts centers, museums, after-school programs, and nonprofit arts institutions, (3) expand the ongoing dialogue and interaction between the University, extended Los Angeles community, K-12 public school system, and students in the arts, and (4) extend the School of the Arts and Architecture commitment to University and community partnerships by linking teaching and research with undergraduate education, civic engagement, and support for institutional priorities to improve the quality of life for Los Angeles residents.

Undergraduate Study
Visual and Performing Arts Education Minor

The Visual and Performing Arts Education minor is intended to supplement the education of undergraduate students enrolled in the Architectural Studies, Art, Art History, Dance, Design/Media Arts, Ethnomusicology, Music, Theater, and World Arts and Cultures majors.

To apply to the minor, students must have completed at least 50 percent of the lower-division requirements of their specific majors and
Arts Education M102 with a grade of B or better, be in good academic standing with an overall grade-point average of at least 2.7, and submit a minor application, which includes a concentration proposal to be developed in consultation with the Visual and Performing Arts Education director.

**Required Courses (28 to 32 units with a minimum of 24 upper-division units):**
1. Core and capstone sequence requirement: Arts Education M102, M192, M192SL (Arts Education M192 and M192SL include a guided teaching experience), (2) arts education requirement: two courses selected from Arts Education 20, 101, 102, 103, 104, 190, 190SL, 195 (minimum 4 units), (3) one upper-division Education course (list of recommended courses available from the Arts Education program office or the school Student Services office), and (4) one upper-division elective course (minimum 4 units) selected from Arts Education or, by petition, an arts education related course (list of recommended courses available from the Arts Education program office or the school Student Services office).

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.

**Arts Education Lower-Division Course**

20. Introduction to Community Engagement through Arts. (5) Lecture, three hours; discussion, one hour; outside study, 11 hours. Introduction to fields of community engagement and arts education informed by philosophies of progressive education and social justice movements. By looking at community engagement as issue of equity and social justice, examination of basic theories of creativity, artistic development, and community partnerships, and history, philosophies, politics, and sociocultural trends of community engagement in American society.

Attention at UCLA arts presentations and introduction to creative process. Readings and discussions to understand community engagement and arts education as crucial elements of comprehensive education, with emphasis on writing process, including regular writing assignments that require students to read, analyze, critique, and evaluate community arts practices and arts education scholarship. P/NP or letter grading.

**Upper-Division Courses**

101. Selected Topics in Arts Education. (4) (Formerly numbered Arts and Architecture 101.) Lecture, three hours; outside study, nine hours. Selected topics in arts education explored through variety of approaches that may include community projects, guided teaching experiences, studio and/or fieldwork, readings, discussion, research papers, and oral presentations. Topics announced in advance. May be repeated for maximum of 8 units. P/NP or letter grading.

M102. Introduction to Arts Education for Multiple Publics: Theory and Practice. (4) (Formerly numbered Arts and Architecture M102.) (Same as Education M104L) Seminar, three hours; outside study, nine hours. Introductory course with focus on arts education for multiple publics in inner-city settings. Study of core issues in arts education, creativity, and social justice as students develop, implement, and assess original syllabi, lesson plans, and community learning projects for multiple publics in inner-city schools and arts organizations. Collaboration with partner schools in planning, teaching, and evaluation of arts education programs in dance, music, theater, and visual arts. P/NP or letter grading.

103. Socially Engaged Pedagogy in Arts. (4) Lecture, three hours; outside study, nine hours. Students are in contact and conversation with active community-based artists and youth workers regularly utilizing socially engaged goals, principles, and practices. Based on readings and investigations, students research and write one case study on one particular arts site that is currently utilizing socially engaged pedagogies and art-making strategies. Theoretical and experiential components provided for students from all arts disciplines to explore tactics and strategy of socially engaged pedagogy and arts practice through variety of approaches that may include readings, visual and audio documentation, discussion, research papers, oral presentations, and relevant guest speakers. P/NP or letter grading.

105. Arts Programs in Correctional Institutions: History, Theory, and Practice. (4) Lecture, three hours; outside study, nine hours. Examination of attitudes of prison arts programming with correctional staff, artists working in prisons, political figures, and community while critically engaging with consequences of correctional environment without outside influence of arts as role model for inspiration and discipline. Selected topics and themes in arts education in correctional institutions explored through variety of approaches that may include readings, visual and audio documentation, discussion, research papers, oral presentations, and relevant guest speakers. P/NP or letter grading.

M192. Arts Education Undergraduate Practicum: Preparation, Observation, and Practice. (4) (Formerly numbered Arts and Architecture M192.) (Same as Education M190.) Seminar, three hours. Enforced requirements: course M102. Limited to juniors/seniors. Training and supervised practicum for advanced undergraduate students participating in Visual and Performing Arts Education minor. Students implement and evaluate original arts education programs under guidance of faculty members in small course settings. P/NP or letter grading.

M192SL. Arts Education Undergraduate Practicum and Capstone Project. (4) (Formerly numbered Arts and Architecture M192SL) (Same as Education M190SL) Seminar, three hours; practicum, three hours; outside study, six hours. Enforced requirements: course M102, M192. Limited to juniors/seniors. Continuation of arts education training and supervised practicum for advanced undergraduate students participating in Visual and Performing Arts Education minor. Students continue to implement and evaluate original arts education programs under guidance of faculty members and designated guiding teachers in K-12 public school settings. May be repeated for credit with consent of instructor. P/NP or letter grading.

195. Community Internships in Arts Education. (2 to 4) (Formerly numbered Arts and Architecture 195.) Tutorial, one hour; fieldwork, eight to 10 hours. Limited to juniors/seniors. Internship in supervised setting in K-12 schools or community arts organizations. Students meet on regular basis with instructor and provide periodic reports of their experience. May be repeated for maximum of 8 units. Individual contract with supervising faculty member required. P/NP or letter grading.

197. Individual Studies in Arts Education. (2 to 4) (Formerly numbered Arts and Architecture 197.) Tutorial, to be arranged. Preparation: 3.0 grade-point average in major. Limited to juniors/seniors in Visual and Performing Arts Education minor and/or arts education teaching sequence. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. Letter grading.

**Women's Studies**

See Gender Studies

**World Arts and Cultures/Dance**

School of the Arts and Architecture

150 Kaufman Hall
Box 951608
Los Angeles, CA 90095-1608
310-825-3951
wacinfo@arts.ucla.edu
http://www.wacd.ucla.edu

Lionel A. Popkin, MFA, Chair
Aparna Sharma, PhD, Undergraduate Vice Chair
Janet M. O'Shea, PhD, Graduate Vice Chair

**Professors**

Kyle G. Abraham, MFA, in Residence
Judith F. Baca, MA
Susan L. Foster, PhD
David Z. Frost, MFA
David H. Gere, PhD
Vania E. Marks, BA
Peter Nabokov, PhD
Janet M. O'Shea, PhD
Lionel A. Popkin, MFA
Allen F. Roberts, PhD
Mary Nooter Roberts, PhD
David J. Rousseve, BA
Peter M. Seliers, BA
David Delgado Shorter, PhD
Patricia A. Turner, PhD
Christopher A. Waterman, PhD
Cheng-Chieh Yu, MFA

**Professors Emeriti**

Judith B. Alter, EdD
Donald J. Cosentino, PhD
Irina Dosamantes-Beaudry, PhD
Ellie A. Dunin, MA
Pia S. Gilbert
Michael O. Jones, PhD
Angelia S.-Y. Leung, MA, CMA
Judy M. Mitoma, MA
Colin H. Quigley, PhD
Marta E. Savigliano, PhD
Carol J. Scottorn, MA
Doris Siegel
Allegra Fuller Snyder, MA
Emma Lewis Thomas, PhD

**Associate Professors**

Anurima Banerji, PhD
Aparna Sharma, PhD

**Lecturers**

Gracelyn W. Coad, MA
Robert W. Een, BA
Leigh R. Fooad
Meryl L. Friedman
Ginger Holguin, BFA
Jackelyn G. Lopez, BA
Patrick Polk, PhD
Wilfrid G. Souly
Jason C. Tsou, MS
Natsuo Tomita
Shel Wagner-Rasch
Margaret J. Williams

**Adjunct Assistant Professors**

Renee Harris
Roslyn K. Warby

**Visiting Assistant Professor**

Katherine Smith, PhD
Scope and Objectives

Defined by a dynamic blend of theory and practice, the Department of World Arts and Cultures/Dance (WACD) is led by a renowned faculty of scholars, activists, curators, filmmakers, and choreographers dedicated to critical cross-cultural analysis and art-making. The department is the place to make dances, explore digital media, curate exhibitions, become an arts activist, and develop scholarly expertise in culture and the arts. Multiple disciplines and artistic approaches are used to encourage students to position their work within broad social contexts.

In the World Arts and Cultures BA arts activism, visual cultures, and critical ethnographies are emphasized. The Dance BA integrates composition, training, and improvisation, while challenging students to locate dance politically, culturally, and historically. The MFA in Dance promotes an interdiscoursal choreographic inquiry and engages with global discourses around the body and performance. The MA/PhD programs address theories of corporeality, performance, visuality, and culture, and offer interdisciplinary training that fosters independent research. The Art and Global Health Center enables undergraduate and graduate students to explore art as a life-saving activity.

The path-breaking programs of the department are committed to academic excellence, diversity, freedom of expression, activism, and social transformation through the arts.

The undergraduate program offers majors in Dance and in World Arts and Cultures.

The BA in Dance thoroughly integrates learning to dance, learning to make dances, and critical interrogation of dance as a cultural practice. Students study a variety of dance techniques from around the world throughout their studies. They enroll in a four-term sequence in dance composition, with additional opportunities to participate in the creation of their own dances, as well as working as dancers in the creation of new works by faculty members and visiting artists. Further, they engage in a core of four courses in the study of scholarly dance discourse around the body and dance, launching a critical inquiry into their own study of bodily practices, internalization of the embodied experience, and how bodily ideas and embodied experiences are interpreted and communicated outwardly and interpersonally, both locally and globally.

The BA in World Arts and Cultures highlights culture and representation as key perspectives for understanding creativity in local and global arenas. Three areas of cross-cultural and interdisciplinary study are available: arts activism, critical ethnographies, and visual cultures. These areas define the department's commitment to a range of practices, including ethnography, activism, visual and related expressive arts, documentary and short films, museum and curatorial studies, performance, and other creative perspectives and methods. Courses combine theory and practice and are grounded in culturally diverse artistic expressions.

All students are encouraged to complement the required set of core and elective departmental courses with others offered across campus, such as courses from ethnic and area studies programs, and may organize their course of study in relation to particular interests or professional goals (e.g., international comparative studies, intercultural studies, education, area specializations such as Africa, Asia, or Latin America, minority discourse, gender studies).

The graduate program offers Master of Arts and PhD degrees in Culture and Performance and a Master of Fine Arts in Dance, with an emphasis on arts activism and interdisciplinary art-making. The MFA in Dance offers opportunities to engage multiple movement practices as students work on pioneering research in the form of new choreography. Students may focus on media, dance studies theory, and theories of the body as supplements to their work as choreographers. The Art and Global Health Center within the department presents further opportunity for learning and practice.

While operating with considerable independence, the two graduate degree areas are unified by the department's common concern for aesthetic production, corporeality and performance, the dynamics of tradition, and culture-building in contemporary societies. Connections are forged between critical theory and artistic practices, and attention is given to the changing social roles and responsibilities of artists, practitioners, and scholars of the arts in the U.S. and worldwide.

Undergraduates and graduates have excelled in fields including technology and the arts, videography, documentary work, public service, education, theatrical/events production, performance, activist, public health, and medicine. They have made careers in community nonprofits and activist groups, government arts agencies, museums, and arts foundations. Potential careers for MA, PhD, and MFA graduates also include positions in research universities and colleges, and MFA graduates are active as choreographers/performers in their own companies or with other professional organizations.

Undergraduate Study

Dance BA

All students take a set of courses as preparation for the Dance major that focus on the integration of dance and critical analysis. For students who transfer into the major, depending on the year of entry and prior coursework, lower-division preparatory coursework may be waived or substituted. When students enter the major, they continue their studies of dance technique, composition, and analysis, and they also enroll in a primary and secondary research area.

The three research areas are (1) creative inquiry as research, (2) critical dance studies, and (3) dance and civic engagement. The creative inquiry as research area is grounded in contemporary choreography with a focus on dance-making and performing in a wide range of genres from throughout the world. Opportunities are provided for students to present their own choreography, to participate in performances by others, and to study performance production and videography. The critical dance studies area focuses on study of scholarship examining the body and dance, in their cultural and historical contexts. Courses in dance history, dance and culture, and dance as an iden-tificatory practice are offered that enable students to analyze the rhetorical and ideological significance of dance. The dance and civic engagement area is grounded in the investigation and activist-oriented work of artists and the role of dance in the public sphere, and offers a wide range of courses in the nature of activism as well as opportunities for fieldwork, education internships, and other forms of community involvement.

Students select one area as their primary area and another as their secondary area. Elective options provide further deepening of student knowledge and skills in any or all of the areas. Students may also consider courses from programs outside the department and may organize their course of study in relation to their particular interests.

Students who wish to confer with the departmental student affairs officer regarding program planning and major requirements should contact the undergraduate counselor at 310-825-8537.

Admission

New students are admitted to the Dance major for fall quarter only. All applicants are reviewed individually, based on submission of a written research paper, transcripts, two letters of recommendation, and one personal essay. These supplementary materials are requested from students in mid-December, after the general UC application is received and processed, and are due back in the department in January. For students enrolled in a primary and secondary area.

For freshman applicants, college placement test scores are also considered. Students must participate in a late January/early February audition. Specifics about the audition are included in the e-mail requesting the above-mentioned supplementary materials.

Change of major applications are considered once a year. Current UCLA students who petition to change their major are required to meet with the student affairs officer prior to application, but no later than the eighth week of fall quarter in order to participate in the departmental supplementary application process during fall/winter quarters for admission into the program the following spring or fall quarter. They are required to take selected departmental courses before and during the term in which they apply to the program (contact the student affairs officer for a list of selected courses).
They must have a minimum 2.0 overall grade-point average, a minimum 2.0 GPA in all departmental courses taken, and no more than 90 quarter units at the time of application. All students are required to audition in early winter quarter and may be interviewed as part of the application process.

Preparation for the Major

Required: Dance 1, 16, 44, 45, 67A, 67B, 70.

The Major

The Dance major consists of 76 units of coursework.

Required: (1) Dance 101, 117A, 117B and (2) 10 units in the primary area and 5 units in the secondary area selected from the following: (a) creative inquiry as research—Dance 114, 116, 117C, 118, 119, C122, 169, 170, C171, 174A, 174B, C180, or other upper-division courses with faculty approval, (b) critical dance studies—Dance C145, C152, M157, 158, 159, 160, 161, CM168, World Arts and Cultures 199, or other upper-division courses with faculty approval, (c) dance and civic engagement—Dance 165, 166, 167, C184, World Arts and Cultures 100A, 100B, 103, 114, 144, 160, 177SL, 195, or other upper-division courses with faculty approval (no more than 8 units of courses 114 and/or 160 may be applied toward this area). Students also have the option to propose a senior honors project through Dance 166A and 166B.

Movement Arts/Dance Practices—Required: A total of 48 units of practice courses. A minimum of two technique courses per term until completion is strongly recommended. Thirty of the total 48 units must be selected from Dance 6, 9, 13, 15, 56, 59, 63, 65, C106A, C113A, C115, 116. Of these 30 units, a minimum of 6 units of a first style and 4 units of a second style must be at the advanced level. Eighteen of the total 48 units may be selected from Dance 5, 10, 11, 12, 16, 52, 70, 112A, World Arts and Cultures 55, 78, 80, 178. No more than 8 units of World Arts and Cultures 78 or 178 may be applied toward this requirement.

Senior Honors Project

Students may participate in a senior honors project consisting of 10 additional units. The project provides students with opportunity to demonstrate mastery and integration of knowledge and learned abilities from the major. The project may take various forms—from choreographic performance projects or an academic research paper to field/internship work in an identified area of research focus. With faculty advising, students must declare their intent to participate by spring quarter of their junior year. They identify a faculty mentor and work closely with that person on the development of the project, submitting a senior project proposal for faculty approval by the beginning of the senior year. In their senior year they enroll in a two-term course sequence (Dance 186A, 186B) to coordinate and present their research findings.

World Arts and Cultures BA

Three areas of cross-cultural and interdisciplinary study are available in the World Arts and Cultures major: arts activism, critical ethnographies, and visual cultures. Students are introduced to all three areas through introductory courses the first year and then by a pyramidal progression, they develop intermediate knowledge in two areas followed by advanced knowledge in the area selected as the individual specialty. Four lower-division and three upper-division core courses are required to establish interdisciplinary relationships between theory and discourse, methods, and experience. Representation is studied within societies—as people understand their own lives and the world around them—and then from the outside looking in through humanitarian scholarship.

The major emphasizes hands-on activities such as internships to build skills necessary to participate in the required senior projects. In consultation with faculty advisers students select elective courses within and outside the department to increase knowledge of particular area studies, histories, literatures, theories, and methods.

Students who wish to confer with the departmental student affairs officer regarding program planning and major requirements should contact the undergraduate counselor at 310-825-8537.

Admission

New students are admitted to the major for fall quarter only. All applicants are reviewed individually, based on submission of a written research paper, transcripts, two letters of recommendation, and one personal essay. These supplementary materials are requested from students in mid-December, after the general UC application is received and processed, and are due back in the department in January. For freshman applicants, college placement test scores are also considered.

Change of major applications are considered once a year. Current UCLA students who petition to change their major are required to meet with the student affairs officer prior to application, but no later than the eighth week of fall quarter in order to participate in the departmental supplemental application process during fall/winter quarters for admission into the program the following spring or fall quarter. They are required to take selected departmental courses before and during the term in which they apply to the program (contact the student affairs officer for a list of selected courses). They must have a minimum 2.0 overall grade-point average, a minimum 2.0 GPA in all departmental courses taken, and no more than 90 quarter units at the time of application. Students may be interviewed as part of the application process.

Preparation for the Major

Required: World Arts and Cultures 1, 20, 24, 33, and one 5-unit elective selected from course 2, 22, M23, or 51W.

The Major

The World Arts and Cultures major consists of 45 units of coursework.

Required: (1) World Arts and Cultures 100A or 100B, 104, 124; (2) a minimum of 12 units from at least two different areas: area 1 (arts activism)—World Arts and Cultures 103, 114, 120 (with faculty approval), 144, C145, C152, C159, 160, C164, C168, 174A, 174B, 175SL, 195, 199, or other upper-division courses with faculty approval (no more than 8 units of courses 114 and/or 160 may be applied toward this area), area 2 (critical ethnographies)—courses 120 (with faculty approval), 121, 132, C139, CM140, C141, C142, C146, C150, C151, 174A, 174B, 181, 195, 199, or other upper-division courses with faculty approval; (3) 8 additional units of upper-division elective courses from inside or outside the department by petition; and (4) courses 166A and 166B (senior honors project) or equivalent coursework with faculty approval.

Senior Honors Project

All students must also complete World Arts and Cultures 186A and 186B (or 10 units of equivalent coursework with faculty approval), the required senior honors project which must be selected from each student’s area of inquiry. Students begin to identify a project in spring quarter of their junior year and submit a senior project proposal for faculty approval by the beginning of the senior year. They begin to work with a designated faculty adviser in fall quarter of the senior year. Projects may include written theses, visual ethnographies, documentaries, installations, short films, internships, creative service, field-based research, and curatorial projects, as well as other formats. Projects are crafted in close consultation with a faculty adviser so as to provide capstone experiences that draw together ideas and abilities from four years of study, while positioning students for postgraduate opportunities for further study or for entrance to job markets.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of World Arts and Cultures offers Master of Arts (MA) and Doctor of Philosophy (PhD) degrees in Culture and Performance and a Master of Fine Arts (MFA) degree in Dance.
Dance

Lower-Division Courses

1. Global Perspectives on Dance. (5) Lecture, three hours; discussion, one hour. Examination of practices of choreographic and performance techniques in different cultural settings and historical eras. Introduction to field of dance studies through analysis of broad spectrum of philosophies and practices within global contexts. Focus on creative act of dance-making, thinking and understanding act of improvising, and diverse ways of training one’s body. By framing process of analysis within array of historical periods, development of capacity to engage with dance as lived social and artistic practice while refining critical seeing, thinking, and writing skills. P/NP or letter grading.

2. Beginning Ballet. (2) Studio, three hours. Beginning-level study of ballet as movement practice. May be repeated for credit without limitation. P/NP or letter grading.


4. Beginning Martial Arts. (2) Studio, three hours. Beginning-level study of Tai Chi Chuan and other martial arts forms. May be repeated for credit without limitation. P/NP or letter grading.


7. Beginning Modern/Postmodern Dance. (2) Studio, three hours. Beginning-level work in modern and/or postmodern movement practices. May be repeated for credit without limitation. P/NP or letter grading.

8. Intermediate Modern/Postmodern Dance. (2) Studio, three hours. Intermediate-level work in modern and/or postmodern movement practices. May be repeated for credit without limitation. P/NP or letter grading.

9. Beginning West African Dance. (2) Studio, three hours. Beginning-level study of dances originating from Mandingo culture in sub-Saharan Africa. May be repeated for credit without limitation. P/NP or letter grading.

10. Beginning West African Dance. (2) Studio, three hours. Beginning-level study of dances originating from Mandingo culture in sub-Saharan Africa. May be repeated for credit without limitation. P/NP or letter grading.

11. Yoga. (2) Studio, three hours. Beginning-level study of yoga. May be repeated for credit without limitation. P/NP or letter grading.

12. Beginning Special Topics. (2) Studio, three hours. Beginning-level study of variable movement practices. May be repeated for credit without limitation. P/NP or letter grading.


14. Beginning Improvisation. (2) Laboratory, four hours. Introduction to creative exploration in movement through improvisational and compositional exercises that access and develop imagination, find relationship between imagination and dance making, and enrich movement vocabulary. May be repeated for credit without limitation. P/NP or letter grading.

15. Beginning Improvisation. (2) Laboratory, four hours. Introduction to creative exploration in movement through improvisational and compositional exercises that access and develop imagination, find relationship between imagination and dance making, and enrich movement vocabulary. May be repeated for credit without limitation. P/NP or letter grading.

16. Beginning Improvisation. (2) Laboratory, four hours. Introduction to creative exploration in movement through improvisational and compositional exercises that access and develop imagination, find relationship between imagination and dance making, and enrich movement vocabulary. May be repeated for credit without limitation. P/NP or letter grading.

17. Intermediate Modern/Postmodern Dance. (2) Laboratory, four hours. Study of modern and/or postmodern movement practice. May be repeated for credit without limitation. P/NP or letter grading.

18. Intermediate Modern/Postmodern Dance. (2) Laboratory, four hours. Study of modern and/or postmodern movement practice. May be repeated for credit without limitation. P/NP or letter grading.


Upper-Division Courses

101. Dramaturgical Tools. (5) Lecture, four hours; discussion, two hours. Enforced requisite: course 45. Ideas of dance, choreography, and movement have achieved broad resonance in contemporary performance, art, politics, culture, and studies of social behavior. Examination of conceptual and approaches to dance studies and deployments of its vocabulary within field and beyond, concentrated in four principal approaches: history, ethnography, choreographic analysis, and movement theory. Use of key ideas in dance to investigate areas of performance, embodiment, social construction of identity and difference, and relationship between aesthetics and politics. Design of dance performances to illustrate link between theory and practice. How does dance create alternative modes of history and knowledge in range of cultural contexts. P/NP or letter grading.
159. Movement Theories. (4) Lecture, two hours; laboratory, three hours. Introduction to movement concepts, skills, and teaching principles for modern/postmodern dance instruction. Supervised teaching practicum included. P/NP or letter grading.

160. Topics in Body Mechanics. (4) Lecture, three hours; studio, one hour. Designed for juniors/seniors. Variable topics course with discussion of injury prevention, anatomy for dancers, and study of biological and physical principles of human movement as related to dance. May be repeated for credit without limitation. P/NP or letter grading.

161. Movement Observation and Analysis. (4) Lecture, two hours; laboratory, two hours. Designed for juniors/seniors. Emphasis on dance analysis technique, frame works and techniques such as labananalysis to emphasize culturally defined processes of observing, analyzing, and describing human movement. P/NP or letter grading.

165. Foundations of Dance Education. (4) Lecture, two hours; laboratory, three hours. Introduction to movement concepts, skills, and teaching principles for modern/postmodern dance instruction. Supervised teaching practicum included. P/NP or letter grading.

166. Dance as Culture in Education. (4) Lecture, two hours; laboratory, two hours. Theoretical and practical aspects of teaching ethnic dance, especially in higher education. P/NP or letter grading.

167. Creative Dance for Children. (4) Lecture, three hours; laboratory, one hour. Introduction to movement concepts, skills, and principles for teaching children's dance; emphasis on creative medium of expression. P/NP or letter grading.

CM168. Beyond Academia: Making Art in Real World. (4) (Same as World Arts and Cultures CM168.) Lecture, four hours; outside study, eight hours. Designed for juniors/seniors. Understanding and appreciating bureaucratic structures and regional histories conditioning creation of art in real world, including such practical issues as publicity and grant-writing. Concurrently scheduled with course CM288. P/NP or letter grading.

170. Advanced Production. (1 to 2) Laboratory, three hours; outside study, up to three hours. Requisite: course 70. Further development and application of practical perspectives on producing events in department, including but not limited to theatrical support and planning, costuming, and lighting. Provides students with advanced practical knowledge necessary, as well as opportunity to study nature of this component in world arts and cultures/dance studies. May be repeated for credit without limitation. P/NP grading.

C122. Music and Dance Collaborations. (4) Studio, four hours. Requisites: courses 67A, 67B. Designed for dance students who have had prior coursework/experience in choreography and for music students who have had prior coursework/experience in music composition. Opportunity for directors, choreographers, and composers to work together creating and developing material in their respective disciplines. Emphasis on ways of approaching creative process of making dance and music, presenting material on weekly basis, and developing skills for discussion, critique, and review. Concurrently scheduled with course C222. P/NP or letter grading.

C152. History and Theory of Modern/Postmodern Dance. (4) Lecture, four hours; studio, two hours; outside study, six hours. Introduction to key figures in creation of modern dance, with special attention to their theoretical and practical works and tracing of radical shift to postmodern dance that occurred in mid-20th century. Contemporary developments, both historical and theoretical. Student projects involve choreography and discussion of dance and corporeality. Consult Schedule of Classes for topics to be offered in specific term. May be repeated for credit with topic change. Concurrently scheduled with course C252. P/NP or letter grading.

M157. Rechoreographing Disability. (Same as Disability Studies M157.) Seminar, four hours. Through study of range of performance by, featuring, or about people who identify as disabled, reading and discussion of range of writings about experiences of disability and process of making work about disability by key artists and thinkers. Introduction to concept of choreography as political/cultural idea broadly defined as scored movement and organization and behavior of bodies, as well as choreography as poetic form for expression of ideas, creative tool, or product. Viewing and discussion of work, and embodiement ideas through movement and dance-making. P/NP or letter grading.

158. Choreographing Gender. (4) Lecture, three hours; laboratory, two hours. Designed for juniors/seniors. Analysis of aesthetic codes and theatrical choreographic approaches as they intersect with construction of gender in U.S., with close attention to race, class, and sexuality. P/NP or letter grading.

159. Movement Theories. (2) Lecture, two hours; laboratory, two hours. Study of motor coordination patterns as related to expressive movement features for dance performance. Personalized attention and use of video to increase students' stylistic diversity. Development of movement efficiency for prevention of dance injuries. May be repeated twice. P/NP or letter grading.
CM268. Beyond Academia: Making Art in Real World. (4) Same as World Arts and Cultures CM268.) Lecture, four hours; outside study, eight hours. Designed for graduate students. Focus on understanding bureaucratic structures and regional histories conditioning creation of art in real world, including such practical issues as publicity and grant-writing. Concurrently scheduled with course CM168. S/U or letter grading.

C271. Dance Production: Variable Topics. (4) Lecture, two hours; production lab, two hours. Foundational experience in range of dance production practices, including but not limited to lighting design, set design, costume design, stage management. Practical training in area covered, combined with theoretical inquiry into practice and opportunities for students to reflect on their own work and that of others. Completion of production project required. May be repeated for maximum of 12 units. Concurrently scheduled with course C171. S/U or letter grading.

C280. Dance for Camera. (4) Lecture, two hours; laboratory, two hours. Introduction to making dance for camera. Students acquire and apply basic video production skills for creation of movement-based projects. With rudimentary tools—to film, frame, set up shots, storyboard, design shot lists, and set-up lists, students are trained to export—students create their own dance for camera video projects. Students gain deeper understanding of conceptualization, practice, theory, history, and current state of dance for camera concurrently scheduled with course C180. Letter grading.

C406A. Advanced West African Dance. (2) Studio, three hours. Advanced-level study of dances originating from Mandingo culture in sub-Saharan Africa. May be repeated for credit without limitation. Concurrently scheduled with course C106A. S/U or letter grading.

C409A. Advanced Hip-Hop Dance. (2) Studio, three hours. Advanced-level study of Hip-Hop movement practices. May be repeated for credit without limitation. Concurrently scheduled with course C109A. S/U or letter grading.

C412A. Advanced Special Topics. (2) Studio, three hours. Advanced-level study of variable movement practices. May be repeated for credit without limitation. Concurrently scheduled with course C112A. S/U or letter grading.

C413A. Advanced Ballet. (2) Studio, three hours. Advanced-level study of ballet as movement practice. May be repeated for credit without limitation. Concurrently scheduled with course C113A. S/U or letter grading.

C415S. Advanced Modern/Postmodern Dance. (2) Studio, six hours. Requisite: course 65. Advanced-level work in modern and/or postmodern movement practices. Technical training, with emphasis on increased understanding of movement principles and ability to apply these to performance. May be repeated for credit without limitation. Concurrently scheduled with course C115S. S/U or letter grading.

C441. Dance Production Practicum. (2 to 4) Laboratory; four to eight hours (one or two hours may be individualized consultation). Skills and understanding of production components in roles of stage manager, production assistants, and producer. May be repeated for credit of 8 units. S/U grading.

C452. Directed Field Study in Dance Education. (2 to 8) Seminar; one hour; field study, two hours minimum. Directed field study to provide teaching experience in community school or other approved site. No more than four units may be counted toward MA degree requirements. S/U grading.

C490. Projects in Choreography and Performance. (2 to 8) Tutorial, one three-hour rehearsal per unit per week minimum. Creation, casting, and rehearsing of culminating performance. May be repeated for credit toward MA degree requirements. S/U grading.

C496. Professional Internship in Dance. (4, 6, or 12) Seminar, to be arranged. Full- or part-time supervised fieldwork. Limited to MFA students. Internship in dance, theater, film, or television organization. Participation in creative, administrative, or technical work of professionals in their specialties. S/U or letter grading.

World Arts and Cultures

Lower-Division Courses

1. Introduction to World Arts and Cultures. (5) Lecture, three hours; discussion, one hour. Survey of concepts and theories involved in intercultural, interdisciplinary study of art, aesthetics, and performance. Examination of various modes of creative expression, role of style in daily life, performative representation of cultural identity and difference, and interaction of diverse artistic traditions. Lecture.

2. Lower-Division Seminar. (5) Seminar, four hours; outside study, 11 hours. Variable topics seminar with focus on scholarly and practice-based research in arts. In-depth investigations of topics ranging from body in creative and cultural art-making, visual cultures, oral genres, material culture, study of culture and performance, including individual and cultural identity through arts, creation of dance/theatrical performance, theoretical and analytical approaches to arts practice, arts activism, and other topics pertinent to fields of culture, performance, and dance. Research inquiry methods may include readings, assigned written analysis, supervised fieldwork, individual and collaborative assignments, and/or practice-oriented processes. Substantial culminating project integrating theoretical and practical components of selected seminar topic required. May be repeated for credit. Letter grading.

20. Culture: Introduction. (5) Lecture, four hours; introduction to key concepts and major theoretical and methodological approaches to study of human culture, popular culture, subculture, youth culture, hegemony, gender, race, class, and national identity. Letter grading.

22. Introduction to American Folklore Studies. (5) Lecture, four hours; discussion, one hour; outside study, 10 hours. Cultural/historical survey of role of folklore in development of American civilization and of influence of American experience in shaping folklore in American society; attention also to representative areas of inquiry and analytical procedures. P/NP or letter grading.

23. Introduction to American Indian Studies. (5) Lecture, three hours; discussion, one hour; outside study. Survey of selected Native North American cultures from pre-Western contact to contemporary period, with particular emphasis on early multicultural diversity and diverse patterns of political, linguistic, social, legal, and cultural change in postcontact period. P/NP or letter grading.

24. World Arts, Local Lives. (5) Lecture, three hours; discussion, one hour. Use of Fowler Museum’s long-term exhibition entitled “Intersections: World Arts/Local Lives” as object of study to examine in-depth that arts and an intercultural, political, and religious experience. Drawing heavily on cultures of Africa, Asia, Pacific, and indigenous Americas, both ancient and contemporary, consideration of degree to which notions of aesthetics and efficacy are intertwined and interdependent in art forms made to interweave in people’s lives in active, instrumental ways. Use of specific case studies to illustrate and interro- gate theoretical and methodological issues. Letter grade.

33. Indigenous Worldviews. (5) Lecture, three hours; discussion, one hour. Introduction to study of indigenous worldviews as they are expressed through art, mythology, ritual, health practice, languages, and ecology. With examples spanning globe, consideration of issues of colonialism, tradition, religious change, and legal and social implications of episte- mological differences between people. Examination of critical perspectives on social development, historical progress, and intellectual assimilation. P/NP or letter grading.

51W. Aliens, Psychics, and Ghosts. (5) Lecture, three hours; discussion, two hours. Enforced requi- site: English Composition 3 or English as a Second Language 346. Combines approaches of dis- course analysis and scientific method to understand how people make sense of other people’s stories of aliens, psychics, and ghosts. Exploration of how people make sense of extraterrestrial and otherworldly experience, both in life and after death, and other-than-human life. Satis- fies Writing II requirement. Letter grading.

55. Intermediate World Arts Practices in Global and Transcultural Forms. (2) Studio; three hours; outside study, three hours. Intermediate-level study of world arts practices spanning national and cultural boundaries. Variable topics, such as body music, cross-cultural textile creation, or mural painting, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

78. Private Instruction in World Arts and Cultures. (2 to 4) Studio, three to six hours. Designed for private or semiprivate instruction in one world art practice with distinguished community-based artist to be arranged by students and approved by instructor. May be repeated for maximum of 24 units. P/NP grading.

79. Food Politics: Cultural Solutions to Political Problems. (5) Lecture, four hours; discussion, one hour. Examination of issues of environmental and public health effects of intensive and extensive agri- culture, influence of corporations on government, animal ethics, food deserts and urban gardening, and food insecurity. Focus on representation of such is- sues in literature, photography, public art, and documentaries, graphic novels, and visual art, as well as on initiatives to address such problems through policy and activism. P/NP or letter grading.

80. Video Tools and Techniques. (2) Laboratory, four hours; production introduction to techniques to train students in key techniques of video production. Basic skills spanned to develop short videos for circu- lation via DVD and/or Internet. Practical exercises based on materials and instruction provided in class, spanning production and postproduction processes of video making. Evaluation of students on these exer- cises and final submission of edited sequence of any or all materials developed during course. Training in technical aspects of video production and usage of video tools. P/NP or letter grading.

85. Sophomore-Year Proposal. (1) Lecture, 90 minutes. Planning and execution of proposal for junior year of study, with attention to resources of department and University as whole. P/NP grading.

Upper-Division Courses

100A. Art as Social Action. (5) Lecture, four hours; discussion, one hour. Designed for juniors/seniors. Discussion of what constitutes artist’s social responsibil- ity and in what ways art is qualified to engage in direct political action. Study of tension between powers of this world and powers of art. P/NP or letter grading.

100B. Art as Moral Action. (5) Lecture, four hours; discussion, one hour. Designed for juniors/seniors. One’s ability to distinguish between right and wrong action is culturally intuited, nurtured, and developed. Study of cultural strategies of moral engagement, pers- uasion, and inquiry in personal and public life, including acts of conscience and civil disobedience. P/NP or letter grading.

101. Theories of Performance. (5) Lecture, four hours; studio, two hours. Performance commonly re- fers to activities on proscenium stage. Exploration of that narrow notion of performance by delving into scholarship from young to performance studies, which draws on disciplines of anthropology, cultural studies, gender studies, linguistics, postcolonial theory, and sociology. Exploration in studio of the relationship between performance practice and interdisciplinary performance works that engage with and amplify the- ories studied. P/NP or letter grading.
103. Arts in Communities. (5) Lecture, four hours. Introduction to theoretical and practical understanding of field of community arts by and for multiple publics. Review of relevant issues in field and exploration of roles of artists and arts organizations in struggles for social change, representation, and community building. Through national and international examples, exploration of art works that emphasize participation of citizens in community-based and culturally relevant performance, art, and exhibition. Examination of processes of creative thinking, community involvement, collaborative enterprise, research, and education in community arts. Letter grading.


114. Performance Practicum. (1 to 4) Studio, three to 12 hours. Rehearsal and performance in selected community-based or theatrical work. May be repeated for credit without limitation. P/NP grading.

120. Selected Topics in Cultural Studies. (4) Lecture, three hours. Designed for juniors/seniors. Selected topics in interdisciplinary study of arts and performance in cultural and historical context. Consult Schedule of Classes for topics to be offered in specified term. May be repeated for credit with topic change. P/NP grading.

121. Ethnography and Performance. (4) Lecture, four hours; outside study, eight hours. Survey of some ways that ethnography and performance interrelate, as well as development of some preliminary approaches to effectively document performance events. Reading of ethnographies of performance, as well as consideration of how performances can work ethnographically. Letter grading.

124. Introduction to Field-Based Research Methods. (5) Lecture, three hours. Introduction to methods, techniques, and issues in conducting field-based research, including nature, uses, and limitations of major data-gathering procedures, ethical concerns, sampling, checks and controls, teamwork, interventions, and results as not only tangible and personal outcomes of inquiry but also personal and intangible, such as discussion, discourse, and hands-on exercises, students learn how to plan fieldwork projects and write proposals, prepare consent forms and deal with ethical issues, observe behavior, construct theories, and use audiovisual documentation, and manage and present data. P/NP or letter grading.

M125A. Beyond Mexican Mural: Beginning Muralism and Community Development. (4) Same as Art M189A and Chicana and Chicano Studies M189A.) Studio/lecture, four hours. Corequisite: course M125AL. Investigation of muralism as method of community education, development, and empowerment. Exploration of issues through development of large-scale collaborative digitally created image and/or painting for placement in community. Students research, design, and work with community participants. Continuation of project through stages of production to full scale and community approval. P/NP or letter grading.

M125B. Beyond Mexican Mural: Advanced Muralism and Community Development. (4) Same as Art M186C and Chicana and Chicano Studies M186C.) Studio/lecture, six hours. Requisites: courses M125A, M125BL. Corequisite: course M125SL. Continuation of investigation of muralism as method of community education, development, and empowerment. Exploration of issues through development of large-scale collaborative digitally created image and/or painting for placement in community. Students research, design, and work with community participants. Continuation of project through stages of production to full scale and community approval. P/NP or letter grading.

M125C. Beyond Mexican Mural: Advanced Muralism and Community Development. (4) Same as Art M186C and Chicana and Chicano Studies M186C.) Studio/lecture, six hours. Requisites: courses M125A, M125BL. Corequisite: course M125SL. Continuation of investigation of muralism as method of community education, development, and empowerment. Exploration of issues through development of large-scale collaborative digitally created image and/or painting for placement in community. Students research, design, and work with community participants. Continuation of project through stages of production to full scale and community approval. P/NP or letter grading.

126. Ciciana Art and Artists. (4) Same as Art M184 and Chicana and Chicano Studies M175.) Lecture, four hours. Introduction to Chicana art and artists. Examination of Chicana aesthetic. Chicana artists have developed unique experience and identity as artists and as identity/cultural and Chicano Artists. Letter grading.

C129. Food Customs and Symbolism. (4) Lecture, three hours. Designed for juniors/seniors. Introduction to foodways, with particular attention to customs and symbolism in American food. Sensory realism and child rearing practices, foodsharing, food and identity, food and its emotional significance, aversions and taboos, advertising, changing food habits, and American diet. Concurrently scheduled with course C229P. P/NP or letter grading.

CM130. Space and Place. (4) (Formerly numbered M130.) Same as Architecture and Urban Design CM130.) Lecture, three hours. Survey of array of spaces and places from cross-cultural or comparative perspective and with performance emphasis, with focus on mutual interaction of human beings and their created environments. Emphasis on common, ordinary, vernacular non-built and built environment, which are built and used by members of small-scale, traditional, and transitional communities around world. Concurrently scheduled with course CM230, P/NP or letter grading.

132. Narrative and Oral Performance. (4) Lecture, four hours. Survey of concepts of story as text versus narrating as oral performance, studies of individual narrators, how stories are learned in persons work in communities or put to work. Interaction of narrator and audience, how place and experience become embodied in narratives, modes of representing oral narrating, and politics of stories and oral performances. Concurrently scheduled with course CM230, P/NP or letter grading.

133. Textiles of World. (4) Lecture, four hours; discussion, one hour; laboratory, one hour. How cloth and clothing was and continues to be hand-woven in indigenous societies. Use of textiles from Fowler Museum collection to coordinate hands-on experience with cultural history. May be repeated twice for credit. P/NP or letter grading.

C138. American Indian Arts in Performance. (4) Seminar, four hours. Acquisition of awareness and sensibility to the dynamic concept of American Indian arts of performance, worlds of performance and material culture and development of ability to focus on them and learn to conduct research on them. Examination of wide range of American Indian art and craft traditions within fullest possible range of such contexts, with performance given its most generous definition. Study of spectrum of genres, including architecture, social and dramatic arts, masks, and dance, to investigate how such items play their part and come alive through movement, sound, spoken word, silence, and even dreams and visions. Concurrently scheduled with course C238P. P/NP or letter grading.


CM140. Healing, Ritual, and Transformation. (4) (Same as Gender Studies CM143.) Lecture, four hours. Intensive study of eight to 10 hours by role of healers, historically and within contemporary culture-specific contexts. Exploration of psychological functions served by role of healing priest for role of art in healing troubled communities. Concurrently scheduled with course CM240P. P/NP or letter grading.

C141. Carnival and Festivity. (4) Lecture, three hours; fieldwork, one hour. Study of traditional calendrical, religious, and local festivals and related events in their cultural and historical contexts, with emphasis on Carnival. Concurrently scheduled with course CM141P. P/NP or letter grading.


143B. Introduction to Museology: Museum Exhibitions and Education. (5) Lecture, six hours. Conceptual and practical development of exhibitions and formulation of educational, interpretive, and other goals for specified audiences. Design considerations, media applications, and interpretation process. P/NP or letter grading.

144. Make Art/Stop AIDS. (5) Lecture, studio, two hours. Can arts save lives? That is central question posed here in relation to global AIDS epidemic. Working in close connection with public health and epidemiology, exploration of arts as powerful effective tool in AIDS prevention and treatment efforts. Review of literature of AIDS cultural analysis that emerged in late 1980s in U.S. and application of that literature to international hot spots such as India, China, South Africa, and Brazil. Collaborative theory-in-action projects. P/NP or letter grading.

C145. Curating Cultures. (4) Lecture, three hours. Exploration of politics of curators, curating of exhibitions and museum exhibitions, and other gallery and museum activities. Design considerations, media applications, and installation process. P/NP or letter grading.

C146. Politics of Performance. (4) Seminar, four hours; outside study, eight hours. Designed for juniors/seniors. Opportunity to reflect on artists and intellectuals as cultural workers operating in domains of ideology, aesthetics, and theory. Analysis of such key-words as ideology, aesthetics, theory, art, politics, intervention, intellectuals, art, and culture. Concurrently scheduled with course C246P. P/NP or letter grading.
C150. Critical Ethnographies. (5) Lecture, three hours. Enforced requisite: course 20 or 33. Survey of major tropes and rhetorical strategies to explicitly locate ethnographic method as key component of cross-cultural understanding. Examination of categorizations of inside and outsider while also developing various perspectives on performed acts of identity formation. Concurrently scheduled with course C250. P/NP or letter grading.


C152. Visual Cultures. (4) Lecture, three hours. How are ways of seeing constructed through culture, gender, religion, class, and nation? Theories and case studies from around world permit understanding of social processes through which gaze is determined and image economies negotiated. Topics include scopology (ways of streaming), visuality, and visual media. Historicizing and theorizing of arts activism to provide context for concerted analysis, creation, and media. May be repeated for credit. P/NP or letter grading.

C154. Projects in World Arts and Cultures. (2) Laboratory, four hours. Individualized major projects in choreography, performance, cultural studies, production, and media. May be repeated for credit. P/NP or letter grading.

C174A. Projects in World Arts and Cultures. (2) Laboratory, six hours. Individualized major projects in choreography, performance, cultural studies, production, and media. May be repeated for credit. P/NP or letter grading.

C177S. Taking Action: Arts Practice and Community Service. (4) Seminar, four hours; outside study, four hours. Designed for juniors/seniors. Application of training in world arts and cultures through service projects designed by students in collaboration with selected community organizations. Action on impact of service on communities and theories. May be repeated once for credit. P/NP or letter grading.

C185. Private Instruction in World Arts and Cultures. (5-5-5) Lecture, three hours; outside study, 11 hours. Course M185 is requisite to M186. Limited to senior World Arts and Cultures majors. Application of training in world arts cultures to faculty-directed projects. May be repeated once for credit. P/NP or letter grading.

C186A-186B. Senior Honors Projects in World Arts and Cultures. (5-5) Lecture, four hours; outside study, 11 hours. Course 186A is requisite to 186B. Limited to senior World Arts and Cultures majors. Application of training in world arts cultures to faculty-directed projects. May be repeated once for credit. P/NP or letter grading.

C187. Indigenous Film. (5) (Same as American Indian Studies M186.) Lecture, four hours; discussion, two hours. Designed for juniors/senior or semiprivate instruction in world arts practices with distinguished community-based artist to be arranged by students and approved by instructor. May be repeated for maximum of 24 units. P/NP grading.

M179A-M179B-M179C. Cultural Heritage and Representation of Identity. (5-5-5) (Same as Art History M179A-M179B-M179C and Middle Eastern Studies M180A-M180B-M180C.) Course M179A is requisite to M179B, which is requisite to M179C. Designed for transfer students. How tangible and intangible materials of human culture are used by their creators to fashion and reshapethose identities over time and in different spaces. Introduction to multidisciplinary perspectives on human cultures and associated objects they create, different issues attendant on excavation, preservation, and presentation of these materials to different publics, and what all of this means to those whose heritage is being studied and/or exhibited through use of many rich cultural resources on and off campus. Letters, discussion, and writing. Lecture, three hours; discussion, two hours. Examination of topics related to cultural heritage, with strong focus on debate and writing. Writing of weekly short papers and oral presentation on what students have learned. M179B. Pivot Class. Lecture, three hours; discussion, one hour. Requisite: course M179A. Themes and discussions of course M179A taken up in research-based projects. M179C. Research Presentation Class. Lecture, three hours; discussion, two hours. Requisite: course M179B. Practical training in oral presentation of arguments based on research, with individual subjects selected. Designed for juniors/seniors. Application of training in world arts cultures to faculty-directed projects. May be repeated for maximum of 8 units. Individual contract required. P/NP or letter grading.

C189. Directed Research in World Arts and Cultures. (2 to 4) Tutorial, two hours. Preparation: 3.0 grade-point average in major. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for maximum of 8 units. Individual contract required. P/NP or letter grading.

Graduate Courses

200. Theories of Culture. (4) Seminar, three hours; outside study, nine hours. Introduction to history of culture concept in arts, humanities, and social sciences. Analysis of contemporary debates concerning ownership and use of word "culture" and critical elucidation of study of culture. S/U or letter grading.

201. Theories of Performance. (4) Seminar, three hours; outside study, nine hours. Close reading and analysis of classic and contemporary works of performance and related aesthetic practices. Familiarization with ways in which "perform" is defined and deployed by scholars working in disciplines of anthropology, dance, folkloristics, linguistics, literature, musicology, performance studies, philosophy, sociology, and theater. S/U or letter grading.

202. Research Methodologies. (4) Seminar, three hours; outside study, nine hours. Hands-on course designed to help students design and carry out many developed qualitative research methods and designs they encounter in their work. Identification of musical possibilities via record store, Internet, and music library; environmental sounds and patterns; body (clapping, stepping, and singing); and hardware store (found sound). Students collaborate with fellow students in creative efforts and in presentation of results. Concurrently scheduled with course C273. P/NP or letter grading.


C204. Documentary Theories and Approaches. (4) Lecture, three hours. Designed for juniors/seniors. Documentary practices—early actualities, city symphonies, observational cinema, avant garde, and self-reflexive approaches—to interweave creativity and innovation at heart of this form. Key theories and approaches of documentary film. Analysis of how performativity, subjectivity, and ideology percolate documentary aesthetic, technique, and genre. Concurrently scheduled with course C284. P/NP or letter grading.

C215. Art and Global Health. (4) Seminar, three hours. How do films and health-based methodologies in pursuit of improved health outcomes, using examples from international projects created and supported by UCLA Art and Global Health Center. Readings include texts by artists and arts scholars and articles from public health and medical literature. Seminar members propose their own arts-based health-focused methodologies and case studies. Concurrently scheduled with course C258. P/NP or letter grading.

C216. Public Writing in Arts. (4) Lecture, four hours; outside study, eight hours. Survey of journalistic approaches to writing about arts, with eye toward shaping public discourse. Seminar on LA Art and Global Health Center. Arts activist projects organized by seminar members supported and encouraged. Concurrently scheduled with course C259. P/NP or letter grading.

C217. Sound Resources for Performance. (4) Lecture, three hours; studio, one hour; outside study, eight hours. Designed for juniors/seniors. Exploration of music, in search of interesting, new, and unusual. Investigation of musical possibilities via record store, Internet, and music library; environmental sounds and patterns; body (clapping, stepping, and singing); and hardware store (found sound). Participants collaborate with fellow students in creative efforts and in presentation of results. Concurrently scheduled with course C273. P/NP or letter grading.

C218. Variable Topics in Video Production/Prac- tice. (4) Lecture, two hours; laboratory, two hours. Enforced requisite: course 80. Training in low-budget and nonprofessional video production; use of digital recording, interviews, and digital editing. May be repeated once for credit. P/NP or letter grading.

C230. Theories of Performance. (4) Lecture, four hours. Survey of ethnographic film and video, with focus on studies of expressive culture. Emphasis on critical and comparative approaches to visual study of culture, community, and arts. P/NP or letter grading.

C258. Looking at Writing. (4) Lecture, three hours. Designed for juniors/seniors. Application of training in world arts and cultures through service projects designed by students in collaboration with selected community organizations. Action on impact of service on communities and theories. May be repeated once for credit. P/NP or letter grading.
and creation of research problems, development of designs, actual data collection, and analysis procedures to address those problems. S/U or letter grading.

203. Prosemear: Dance Studies. (4) Seminar, three hours; outside study, nine hours. Survey of topics and issues and problems in study of dance and body movement in cultural, social, and historical context. S/U or letter grading.

204. Theories of Corporeality. (4) Seminar, three hours; outside study, nine hours. Cross-cultural and interdisciplinary perspectives on human body. Topics include representations of body, body symbolism, embodiment of identity (including gender, race, ethnicity, and class), and analysis of dance and other somatic modes of performance. S/U or letter grading.

207. Ethnography of Performance. (4) Seminar, three hours; outside study, nine hours. Survey of methods and ethnohistoric study of performance in cultural context. Field documentation, participant observation, oral history and interview techniques, performative dimensions of ethnographic research, ethnography and political-ethnic representation. S/U or letter grading.

210. Ethnography of and as Colonialism. (4) Seminar, three hours. Beginning with 1550 debates over Indian humanity and ranging to contemporary scholarship about and by indigenous peoples, focus on intersections of writing, colonialism, violence, and historiography in Americas. Exploration of relationship between indigenous reasoning about race and postmillennial, Western, and academic practices of writing history. Development of critical stance on utility of postcolonial theories as such perspectives bear on anthropological and historical studies of indigenous religiosity. Regions include southwest Colombia, Orinoco Delta in Venezuela, Valley of Mexico, and several places throughout U.S. southwest, plains, and Great Lakes regions.

216. Analyzing Narrative and Oral Performance. (5) Lecture, four hours. Designed for graduate students. Exploration of ways of documenting individual narrators and interpreting their styles and repertoires; how narrators conceptualize and perform narrative discourse, impact of audience and situated event on both narrating story, and how experiences and values are communicated through narrating, modes of representing oral narratives, politics of narrative and oral performance. S/U or letter grading.

220. Seminar: Culture and Performance. (4) Seminar, three hours; outside study, nine hours. Designed for graduate students. Variable topics in interdisciplinary and historical studies of performances in social and historical context. May be repeated for credit with topic change. S/U or letter grading.


2251. Ethnography of Religions. (4) Lecture, three hours. Religions are cultural systems helping people to cope with misfortune, deal with death, and find fulfillment in life. Case studies reveal commonalities across cultures as cosmologies define moral being in world, division determines causes of difficulty, spirit mediumship embodies divine intervention, and sacred arts render deities tangible. Nonjudgmental comparative investigation stressing comparison. Concurrently scheduled with course C151. S/U or letter grading.

2252. Visual Cultures. (4) Lecture, three hours. How are ways of seeing constructed through culture, gender, region, class, and ethnicity? Case studies from around world permit understanding of social processes through which gaze is determined and image economies negotiated. Topics include scopophilia, scopophilic practices, power and control, gender, identity, and image economies negotiated. Concurrently scheduled with course C151. S/U or letter grading.

C229. Food Customs and Symbolism. (4) Same as Gender Studies CM243.) Lecture, four hours; outside study, eight hours. Designed for graduate students. Examination of role of healers, historically and within contemporary culture-specific contexts. Exploration of psychological functions served by rites of passage and healing rituals and of role of arts in healing troubled communities. Concurrently scheduled with course CM140. S/U or letter grading.

C241. Carnival and Festivity. (4) Lecture, three hours; fieldwork, one hour. Study of traditional calen- drical, religious, and local festivals and related events in their cultural and historical contexts, with emphasis on American festival occasions and their Old World antecedents. Topics include carnival and carnivalesque and politics of celebration. Concurrently scheduled with course C141. S/U or letter grading.


C246. Politics of Performance. (4) Seminar, four hours; outside study, eight hours. Designed for graduate students. Opportunity to reflect on artists and in- terpreters as cultural workers operating in domains of ideology, aesthetics, theory, politics, intervention, intellectuals, and artists. Concurrently scheduled with course C146. S/U or letter grading.

C250. Critical Ethnographies. (4) Lecture, three hours. Enforced requisite: course 20 or 33. Survey of major tropes and rhetorical strategies to explicitly loco- cate ethnographic method as key component of cross-cultural understanding. Examination of cate- gorical notions of insider and outsider while also de- veloping various perspectives on performed acts of identity formation. Concurrently scheduled with course C150. S/U or letter grading.

C251. Ethnography of Religions. (4) Lecture, three hours. Religions are cultural systems helping people to cope with misfortune, deal with death, and find fulfillment in life. Case studies reveal commonalities across cultures as cosmologies define moral being in world, division determines causes of difficulty, spirit mediumship embodies divine intervention, and sacred arts render deities tangible. Nonjudgmental comparative investigation stressing comparison. Concurrently scheduled with course C151. S/U or letter grading.

C252. Visual Cultures. (4) Lecture, three hours. How are ways of seeing constructed through culture, gender, region, class, and ethnicity? Case studies from around world permit understanding of social processes through which gaze is determined and image economies negotiated. Topics include scopophilia, scopophilic practices, power and control, gender, identity, and image economies negotiated. Concurrently scheduled with course C151. S/U or letter grading.

C258. Theorizing Arts Activism. (4) Seminar, three hours. Historicizing and theorizing of arts activism to provide context for concerted analysis, creation, and protest. Readings include theoretical texts and cur- rent performance histories. Consideration of one par- ticular activist project, with focus on ongoing activism sponsored by UCLA Art and Global Health Center. Arts activist projects organized by seminar members supported and encouraged. Concurrently scheduled with course C138. S/U or letter grading.

C259. Art and Global Health. (4) Seminar, three hours. Exploration of interface of arts- and health- based methodologies in pursuit of improved health outcomes and healing through arts-based projects created and supported by UCLA Art and Global Health Center. Readings include texts by artists and arts scholars and articles from public health and medical literature. Seminar members propose their own arts-based health promotion interventions. Concurrently scheduled with course C159. S/U or letter grading.

C264. Public Writing in Arts. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students. Examination of role of healers, histori- cally and within contemporary culture-specific contexts. Exploration of psychological functions served by rites of passage and healing rituals and of role of arts in healing troubled communities. Concurrently scheduled with course CM140. S/U or letter grading.

C265. Beyond Academia: Making Art in Real Worlds. (4) Formerly numbered CM268.) (Same as Dance CM268.) Lecture, four hours; outside study, eight hours. Designed for graduate students. Focus on understanding bureaucratic structures and re- gional histories conditioning creation of art in real world, including such practical issues as publicity and grant-writing. Concurrently scheduled with course CM168. S/U or letter grading.

C272. Resources for Performance, (4) Lecture, three hours; studio, one hour; outside study, eight hours. Designed for graduate students. Exploration of music, in search of interesting, new, and un- usual. Investigation of musical possibilities via record store, Internet, and music library; environmental sounds and patterns; body (clapping, stepping, and singing); and hardware store (found sound). Participants collaborate with fellow students in creative ap- proaches to writing about arts, with eye toward shaping critique of public writing practices and put- ting that critique into practice. Exploration of new methods (and values for them) that bear on power differential between art makers and commen- tators. Concurrently scheduled with course C164. S/U or letter grading.


C284. Documentary: Theories and Approaches. (4) Lecture, three hours. Analysis of such key- words as ideology, aesthetics, theory, politics, intervention, intellectuals, and artists. Concurrently scheduled with course C146. S/U or letter grading.

C285. Theorizing Arts Activism. (4) Seminar, three hours. Historicizing and theorizing of arts activism to provide context for concerted analysis, creation, and protest. Readings include theoretical texts and cur- rent performance histories. Consideration of one par- ticular activist project, with focus on ongoing activism sponsored by UCLA Art and Global Health Center. Arts activist projects organized by seminar members supported and encouraged. Concurrently scheduled with course C138. S/U or letter grading.

C286. Documentary: Theories and Approaches. (5) Lecture, three hours. Designed for graduate stu- dents. Introduction to documentary practice, city symphonies, observational cinema, avant garde, and self-reflexive films—towards complex and cre- ativity at heart of this form. Key theories and ap- proaches of documentary practice. Analysis of documen- tary, performative, subjective, and ideology perceives docu-
mentary aesthetics and inform cinematographic, audiographic, and editorial decisions. Concurrently scheduled with course C184. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

400. Directed Professional Activities. (2 to 8) Lecture, to be arranged. Directed projects in professional editing, bibliography, filmmography, videography, conference and festival direction, and other professional activities. May not be applied toward MA degree requirements. May be repeated. S/U grading.

451. Teaching Assistant Seminar. (Seminar, one hour; laboratory, three hours. Required of all World Arts and Cultures Department teaching assistants. Lectures, discussion, readings, and practice teaching. May be repeated once for credit. S/U grading.

478. Advanced Private Instruction in World Arts and Cultures. (2 to 8) Studio, three to 12 hours; outside study, three to 12 hours. Private or semiprivate instruction with distinguished community-based artist to be arranged by students and approved by instructor. May be repeated for maximum of 24 units. S/U grading.

480. Seminar: Research Topics. (2 to 4) Seminar, three hours; outside study, three to nine hours. Forum in which faculty, students, and visitors make presentations and obtain feedback on research being planned, conducted, or recently completed. Students required to make minimum of one presentation each term they are enrolled for credit. May be repeated for maximum of 8 units. S/U grading.

495. Teaching Assistant Seminar. (formerly numbered 495.) Seminar, one hour; laboratory, three hours. Required of all World Arts and Cultures Department teaching assistants. Lectures, discussion, readings, and practice teaching. May be repeated once for credit. S/U grading.

496. Teacher Preparation in World Arts and Cultures. (2) Formerly numbered 496.) Seminar, two hours. Directed work in preparation of course syllabi and discussion of topics relevant to developing teaching skills. Fundamental principles and methods with which to design course syllabi and gather resources for courses. Topics include development of teaching philosophy, evaluating/selecting course content, microteaching methodologies, assessment/evaluation/grading practices, and consideration of practical, administrative, and ethical issues. Students meet with instructor to review their specific needs as they progress in development and elaboration of course plans. Microteaching sessions provide context for applying concepts and principles discussed. S/U grading.

590A. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. S/U or letter grading.

590B. Directed Study or Research in Hospital or Clinic. (2 to 8) Tutorial, to be arranged. S/U grading.

597. Preparation for Master's Comprehensive Examination or PhD Qualifying Examination. (2 to 8) Tutorial, to be arranged. Preparation for MA or MFA comprehensive examination or PhD qualifying examin ation. S/U grading.


Writing Programs
College of Letters and Science
146 Humanities Building
Box 951384
Los Angeles, CA 90095-1384
310-206-1145
http://wp.ucla.edu

Bruce J. Beiderwell, PhD, Director
Leigh C. Harris, PhD, Associate Director
Christine Holten, MA, Director, Undergraduate Writing Center

Lecturers
Bruce J. Beiderwell, PhD
Tedi L. Chichester, PhD
Tamar S. Christensen, MA
Richard A. Creese, PhD
Margaret E. Davis, MA
Esha N. De, PhD
Nathan A. Deuel, MFA
Randall J. Falloneto, PhD
Rachel I. Fretz, PhD
Mary E. Galvin, PhD
Lisa Gerrard, PhD
Janet M. Goodwin, MA
Leigh C. Harris, PhD
Thomas A. Hitchner, PhD
Christine Holten, MA
Laila D. Huapla, PhD
Colleen M. Jaurettche, PhD
Linzi M. Jullano, PhD
Jeremy C. Kelley, PhD
David M. Kipen, BA
Bonnie J. Lisle, PhD
Karl F. Lisovsky, MA
Sonia Maassik, MA
Maja Manojlovic, PhD
Lauri M. Mattenson, MA
Mia L.G. McIver, PhD
Nedda Mehdizedeh, PhD
Michele L. Moe, PhD
Shelby A. Popham, PhD
Tara L. Prescott, PhD
Gregory J. Rubinson, PhD
Mary G. Samuelson, PhD
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Shelby A. Popham, PhD
Tara L. Prescott, PhD
Gregory J. Rubinson, PhD
Mary G. Samuelson, PhD

Scope and Objectives
Students need to develop their proficiency as writers and communicators at every stage of their university careers and beyond. Writing Programs offers a series of courses introducing the varieties of university discourse and providing instruction in basic to high-level skills. Besides courses that satisfy the University of California Entry-Level Writing requirement and UCLA English as a Second Language, Writing I, and Writing II requirements, Writing Programs offers language support for international teaching assistants, and administers the Undergraduate Writing Center. In addition, Writing Programs offers advanced elective writing courses for graduate students as well as graduate courses in writing pedagogy that may lead to a certificate.

Undergraduate Study

Entry-Level Writing
Every student who does not satisfy the Entry-Level Writing requirement by presenting transfer credit or acceptable test scores is required to take, as early as possible during the first year in residence, English Composition A, 2, or 21 as determined by performance on the Analytical Writing Placement Examination (AWPE). Students who have not otherwise satisfied the Entry-Level Writing requirement and who have not taken the AWPE before entering UCLA must take it in their first term. For more information regarding Entry-Level Writing, see Undergraduate Degree Requirements in the Undergraduate Study chapter of this catalog.

English as a Second Language Requirement
All entering undergraduate students whose native language is not English and who have not otherwise satisfied the English as a Second Language (ESL) requirement may be required to take one or more ESL courses. First-year undergraduate students are placed into the courses based on the AWPE.

Some transfer students may be held for the ESL requirement. Students are placed into the courses based on the UCLA English as a Second Language Placement Examination (ESLPE) and may be held for up to three English Composition courses (1A, 1B, 1C). Transfer students who are required to sit for the ESLPE include (1) those who have not yet satisfied the Intersegmental General Education Transfer Curriculum (IGETC) and (2) those held at the discretion of Transfer Admission. The ESLPE may be taken once only.

Graduate Study

English as a Second Language Requirement
All entering graduate students whose native language is not English and who have not otherwise satisfied the English as a Second Language (ESL) requirement may be required to take one or more ESL courses. Students are placed into the courses based on the UCLA English as a Second Language Placement Examination (ESLPE) and may be held for up to two ESL courses (300, 301).

The following students are exempt from the ESL requirement: (1) students who hold a bachelor's or higher degree from a university in which English is the medium of instruction and (2) students with a score of 100 or better on the Test of English as a Foreign Language Internet-Based Test (TOEFL iBT) or at least a 7.5 overall band score on the International English Language Testing System (IELTS) examination. See International Applicants in the Graduate Study chapter of this catalog.

Graduate Degree
Writing Programs offers a Graduate Certificate in Writing Pedagogy.
English as a Second Language

Lower-Division Courses

20. Conversation and Fluency. (4) (Formerly numbered 32.) Lecture, four hours. Emphasis on speaking fluently in English by examining rules of conversation, participating actively in class discussions, making group presentations, and completing out-of-class assignments designed to promote interaction with native speakers and familiarize international students with UCLA campus and local community. Offered in summer only, P/NP or letter grading.

21. Pronunciation. (4) Lecture, four hours. Designed to improve clarity, accuracy, and understanding of spoken English through study and practice of pronunciation features as they occur in real speech, using models from television, movies, and online talks. Emphasis on individualized feedback through audorecording and videorecording technology. Offered in summer only, P/NP or letter grading.

22. Public Speaking. (4) Lecture, four hours. Emphasis on making presentations, interacting with audience members, and leading group discussions. Videorecording of student performances to allow students to improve through self and peer evaluation, as well as through individualized instructor feedback. Offered in summer only, P/NP or letter grading.

23. American Culture through Film. (4) Lecture, four hours. Designed to improve listening comprehension and discussion skills by viewing and analyzing variety of American films. Emphasis on understanding and using idiomatic language, expanding vocabulary, recognizing dialect differences, and reflecting on cultural similarities and differences. Offered in summer only, P/NP or letter grading.

24. Preparation for American Universities. (4) Lecture, four hours. Designed for international students planning to apply to American universities. Topics include research suitable undergraduate or graduate programs, interview advisers at local universities, and learn to write effective personal statements. Additional focus on academic reading, vocabulary, and speaking skills. Offered in summer only, P/NP or letter grading.

25. Academic Reading and Writing. (4) Lecture, four hours. Designed to improve reading speed, comprehension, and knowledge of academic writing conventions. Emphasis on synthesizing information from sources, providing proper citations, and avoiding plagiarism. Focus on development of ability to revise and edit one’s own writing. Offered in summer only, P/NP or letter grading.

26. Business Communication: Speaking. (4) Lecture, four hours. Emphasis on giving business and marketing-focused presentations (both individual and group), handling audience questions, and running effective meetings. Videorecording of student performances to allow students to improve through self-evaluation, as well as through individualized instructor feedback. Offered in summer only, P/NP or letter grading.

27. Business Communication: Writing. (4) Lecture, four hours. Emphasis on writing persuasive texts for diverse business audiences. Topics include writing effective summaries and reports, researching companies, and developing professional online profile. Offered in summer only, P/NP or letter grading.

28. English through Language, Culture, and Society. (4) Lecture, four hours. Study of selected language structures through their occurrence within contemporary cultural and societal topics within the English language learning environment. Emphasis on understanding and applying the structures to improve fluency while enhancing critical thinking skills. Meaningful discussions in conjunction with salient written/spoke assignments that situate language learning in real-world contexts. Topics may include gender, sexuality, politics, humor, intercultural communication, media, environmental issues, and local/regional identities. P/NP or letter grading.

29. Humanities and Social Sciences. (4) Lecture, four hours. Designed for international students who wish to improve their English in preparation for an academic major. Emphasis on improving reading comprehension, vocabulary, and writing skills with focus on reading academic, academic, and general literature. Offered in summer only, P/NP or letter grading.

30. Advanced Writing. (4) Lecture, four hours. Emphasis on writing effective academic essays. Topics include research skills, sources and documentation, and writing effective personal statements. Offered in summer only, P/NP or letter grading.

31. Reading and Writing for International Teaching Assistants I. (4) (Formerly numbered 210.) Lecture, five hours. Designed for international graduate students who have received a pass on the English as a Second Language Placement Examination. Emphasis on improving reading comprehension, vocabulary development, and development of academic writing skills with focus on reading comprehension, vocabulary development, and composition techniques, with additional work on grammar and editing. S/U or letter grading.

32. Reading and Writing for International Teaching Assistants II. (4) (Formerly numbered 211.) Lecture, five hours. Designed for international graduate students who have received a marginal pass on the English as a Second Language Placement Examination. Emphasis on improving reading comprehension, vocabulary development, and composition techniques, with additional work on grammar and editing. S/U or letter grading.

33. Reading and Writing for International Teaching Assistants III. (4) (Formerly numbered 212.) Lecture, five hours. Designed for international graduate students who received a passing or marginal pass on the English as a Second Language Placement Examination. Emphasis on improving reading comprehension, vocabulary development, and composition techniques, with additional work on grammar and editing. S/U or letter grading.

34. Reading and Writing for International Teaching Assistants IV. (4) (Formerly numbered 213.) Lecture, five hours. Designed for international graduate students who received an unsatisfactory pass on the English as a Second Language Placement Examination. Emphasis on improving reading comprehension, vocabulary development, and composition techniques, with additional work on grammar and editing. S/U or letter grading.

Upper-Division Courses

101. Pronunciation for Multilingual Students. (4) (Formerly numbered 38B.) Lecture, four hours. Emphasis on accurate articulation of sounds, word stress, rhythm, linking, stress, and other features of fluent spoken English. Use of video recordings to model pronunciations. Offered in summer only, P/NP or letter grading.

102. Public Speaking for Multilingual Students. (4) (Formerly numbered 34.) Lecture, four hours. Emphasis on making presentations in academic and professional settings, interacting with audience members, leading group discussions, and preparing for job interviews. Videorecording of student performances to allow students to improve through self and peer evaluation, as well as through individualized instructor feedback. P/NP or letter grading.

103. Advanced Grammar and Style for Multilingual Students. (4) (Formerly numbered 37F.) Lecture, four hours. Review of form and use of common grammatical structures found in academic discourse. Analysis of stylistic function of certain structures and practice in self-editing strategies. P/NP or letter grading.

104. Workshop in Disciplinary Writing for Multilingual Students. (4) Lecture, four hours. Emphasis on writing and revising well-organized and clearly written essays. Offered in summer only, P/NP or letter grading.

105. Academic Reading and Vocabulary for Multilingual Students. (4) Lecture, four hours. Emphasis on reading academic reading skills using authentic university texts. Focus on improving reading rate and comprehension, expanding academic vocabulary, and developing critical reading skills. P/NP or letter grading.

106. Literature and Language for Multilingual Students. (4) Lecture, four hours. Emphasis on preparing student to read and write in English for academic purposes. Emphasis varies according to topics covered and/or audience to whom course is directed. May be repeated for credit with topic change. P/NP (undergraduates), S/U (graduate students), or letter grading.

Graduate Courses

300. Intermediate Writing and Communication for International Graduate Students. (4) (Formerly numbered 200.) Lecture, four hours. Enforced prerequisite: proficiency demonstrated on English as a Second Language Placement Examination. Development of academic reading, writing, and language skills with focus on reading preparation, vocabulary development, and development of discipline-specific research articles, with additional work on fundamental composition techniques, grammar, and editing. S/U or letter grading.

301. High-Intermediate Writing and Communication for International Graduate Students. (4) (Formerly numbered 201.) Lecture, five hours. Enforced prerequisite: course 300 or proficiency demonstrated on English as a Second Language Placement Examination. Development of academic writing skills with focus on reading comprehension, vocabulary development, and composition techniques, with additional work on grammar and editing. S/U or letter grading.

302. Advanced Writing Workshop for International Graduate Students. (4) Lecture, five hours. Emphasis on writing and editing well-organized and clearly written essays. Offered in summer only, P/NP or letter grading.
English Composition

Lower-Division Courses

1. Introduction to University Discourse. (4) (Formerly numbered A) Lecture, four hours. Required: proficiency demonstrated on Analytical Writing Placement Examination. Introduction to college-level critical reading and academic writing. Engagement in substantial and regular writing and revision assignments through practicing and building on reading, writing, and rhetorical skills. Emphasis on revision, developing syntactic variety and academic vocabulary, and editing for grammar and style. Completion of course with grade of C or better is requisite to course 2. Letter grading.

2. Approaches to University Writing. (5) Lecture, four hours. Emphasis on revision for argumentative coherence and effective style. Completion of course with grade of C or better satisfies Entry-Level Writing requirement. Letter grading.

3. Approaches to University Writing for Multilingual Students. (5) Formerly numbered English as a Second Language 33B) Lecture, five hours. Required: proficiency demonstrated on Analytical Writing Placement Examination (first-year students) or English as a Second Language Placement Examination (transfer students). Development of academic writing skills with focus on reading comprehension, vocabulary development, and fundamental composition techniques, with additional work on grammar and editing. Letter grading.

4. Advanced Composition for Multilingual Transfer Students. (5) Formerly numbered English as a Second Language 33CL) Lecture, five hours. Required: proficiency demonstrated on Analytical Writing Placement Examination (first-year students) or English as a Second Language Placement Examination (transfer students) or course 1A (C or better). Development of academic writing skills with focus on reading comprehenion, vocabulary, academic reading and vocabulary, with additional work on grammar and editing. Letter grading.

5. English Composition, Rhetoric, and Language. (5) Lecture, three hours; fieldwork, two hours. Required: course 2 or 2I (C or better). Rhetorical techniques and skillful argument. Analysis of varieties of academic prose and writing of minimum of 20 pages of revised text. Service learning component includes meaningful work of off-campus agency selected by instructor. Completion of course with grade of C or better satisfies Writing I requirement. Letter grading.

6. Writing Workshop. (2) Lecture, five hours. Designed for juniors or seniors. Advanced study of writing conventions in specific disciplinary areas, with focus on analysis and development of writing expertise in common discursive forms, stylistic patterns, and research practices in given discipline. Each course may be taken independently for credit. P/NP or letter grading. 129A. 129B. 129C. 129D. 129E. 129F.
131A-131D. Specialized Writing. (4 each) Lecture, four hours. Requisite: satisfaction of Entry-Level Writing and English Composition requirements. Designed for juniors/seniors. Advanced writing course designed to help students develop stylistic, formal, and argumentative sophistication in various rhetorical contexts, including different sections that emphasize rhetorical values of major professions and research areas. Each course may be taken independently for credit. P/NP or letter grading. 131A. Law and Politics. 131B. Business and Social Policy. 131C. Medicine and Public Health. 131D. Media and Communications.

132A-132D. Topics in Rhetoric and Writing. (4 each) Lecture, four hours; discussion, one hour. Requisite: satisfaction of Entry-Level Writing and English Composition requirements. Designed for juniors/seniors. Study of specific topics in relationship between rhetoric/writing and social or political history. Each course may be taken independently for credit. P/NP or letter grading. English majors who wish to use course to satisfy departmental requirements may take it for letter grade. 132A. Gender and Writing. 132B. Autobiographical Writing. 132C. Cultural Studies. 132D. Variable Topics.

136A-136B-136C. Practical Writing and Editing. (4-4-4) Lecture, four hours; laboratory, four hours. Preparation: one course from 131 series. Requisite: satisfaction of Entry-Level Writing requirement, course 3. Sequence in practical writing and editing ability specifically designed to prepare students for careers. Analysis, prose and literary styles necessary to variety of writing in professional, nonacademic fields combined whenever possible with practical experience in variety of writing environments at university level. S/U or letter grading.

M131. Topics in Creative Writing. (5) Same as English M131. Preparation: one course from 131 series. Requisite: English Composition 3 or 3D or 3DS or 3SL. Introductory workshop in genre(s) of instructor choice, that may include mixed genres, playwriting, screenwriting, literary non-fictional enrollment in more than one section per term not permitted. May be repeated for maximum of 10 units. May not be used to satisfy workshop requirements for English creative writing concentration. P/NP or letter grading.

M141. Current Methods of Language Teaching. (5) Same as Linguistics M141.) Lecture, four hours; discussion, one hour. Requisite: Linguistics 20. Survey of theory and practice in teaching second languages, including presentation of methods and aids used to teach second languages, (2) current theory and practice underlying skills-based instruction and integrated approaches, and (3) factors that affect second language learning. Development of knowledge base in and rational base for design, development, implementation, and evaluation of second language instruction programs. P/NP or letter grading.

175. Apprenticeship in Composition Tutoring. (2) Seminar, two hours. Enforced requisite: satisfaction of Writing II requirement. Composition Peer Learning Facilitators (PLFs) who work in Undergraduate Writing Center programs on campus. Mentoring in composition and peer learning methodologies. Overview of language, writing, and literacy needs of diverse college-age writers, including developing writers, multilingual writers, and nonnative English-speaking (NNS) writers. Provides opportunity to reflect critically on theoretical and practical frameworks for tutoring to which students have been introduced. PLFs receive guidance and supervision from various observations by course instructor and their peers. May be repeated for credit with consent of instructor. P/NP grading.

180. Advanced Research Writing. (5) Lecture, three hours; laboratory, four hours. Advanced workshop designed for juniors and seniors engaged in large-scale research projects in humanities or social sciences. Students hone research, critical reading, and writing skills, including, digital research, notetaking, and writing workshops. Students practice giving, receiving, and incorporating feedback through peer review, and develop research projects in consultation with colleagues, instructor, and faculty and libraries. Culminates with completion of literature review, academic articles, or thesis chapter. P/NP or letter grading.

M192. Undergraduate Practicum in English: Journals. (2) (Same as English M192.) Seminar, two hours. Training and supervised practicum for undergraduate student editors of campus journals supervised by faculty members in English. Includes Environment and Sustainability, and/or Writing Programs. May be repeated for credit. P/NP or letter grading.

195. Community or Corporate Internships in English Composition. (4) Tutorial, to be arranged. Requisites: course M195A. Tutorial. 195A. Seminar, two hours. Enforced requisite: limited to juniors/seniors. Internship in supervised setting in community agency or business. Students meet on regular basis with instructor and provide periodic reports of their experience. May be repeated for credit. Individual contract with supervising faculty member required. P/NP or letter grading.

195R. Directed Research or Senior Project in English Composition. (2 to 4) Tutorial, to be arranged. Requisite: course 3 or 3H. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

300. Teaching English. (4) Lecture, four hours. Required of candidates for credential in English. Study of theories of rhetoric, composition, reading, and literature as they apply to secondary school or college English curriculum. S/U or letter grading.

401. Current Issues in University Writing Pedagogy. (4) (Formerly numbered 494.) Seminar, three hours. Limited to graduate students. Exploration of literature and theories of postsecondary writing pedagogy that may include focus on changing institutional role of writing instruction, multimodal composition, and linguistic/educational diversity. Letter grading.

402. Writing Pedagogy across Disciplines: Genre and Discourse. (4) Seminar, three hours. Limited to graduate students. Survey of literature in academic writing across curriculum. Examination of writing conventions, genres, and styles in graduate student academic disciplines, with focus on evolving academic discourse and evolving areas of inquiry. Development of best practices for adapting writing pedagogy to contexts in disciplinary discourse, with discussion of challenges for multilingual learners. Letter grading.

403. Language Pedagogy: Form, Meaning, and Function. (4) Seminar, three hours. Designed for graduate students. Survey of theories and applications of language structures and conventions, with insights from discourse analysis and functional grammar. Designed to develop instructor ability to explain structures and to articulate language-based issues of meaning. Integrates research and successful applications of knowledge for improved language-related instruction and feedback in composition studies. Letter grading.

404. Diversity and Student-Centered Pedagogy. (4) Seminar, three hours. Limited to graduate students. Survey of literature on heterogeneous classrooms, with focus on diversity of race, socioeconomic status, geographic background, linguistic skills, and academic preparedness. Development of best practices for adapting writing pedagogy to contexts in disciplinary discourse, with discussion of challenges for multilingual learners. Letter grading.

495A. Teaching Preparation Seminar: Second Language Learners. (4) (Formerly numbered 495G.) Seminar, three hours. Limited to graduate students. Preparation of all teaching assistants prior to teaching English Composition 3 and open to students seeking Graduate Certificate in Writing Pedagogy. Focus on content area, writing, course design, assessment of student writing, and specialized problems that may occur in teaching ESL courses. S/U grading.

495C. Teaching Preparation Seminar: Writing in Disciplines. (2) (Formerly numbered 495A.) Seminar, two hours. Enforced requisite: course 495E. Required of all teaching assistants who are assigned to English Composition 3 courses. Focus on composition pedagogy, course design, assessment of student writing, and specialized problems that may occur in teaching English Composition 3. May be repeated for credit. S/U grading.

495D. Teaching Preparation Seminar: Writing in Disciplines. (2) (Formerly numbered 495C.) Seminar, two hours. Enforced requisite: course 495E. Required of all teaching assistants who are assigned to English Composition 3 courses. Focus on composition pedagogy, assessment of student writing, and specialized problems that may occur in teaching English Composition 3. May be repeated for credit. S/U grading.

495F. Supervised Teaching of Writing in Disciplines. (2) (Formerly numbered 495D.) Seminar, two hours. Enforced requisite: course 495E. Required of all teaching assistants for Writing II courses not exempt by appropriate department or program training and open to students seeking Graduate Certificate in Writing Pedagogy. Training focused on composition pedagogy, assessment of student writing, guidance of revision processes, and specialized writing problems that may occur in disciplinary contexts. Practical concerns of creating assignments, marking and grading essays, and conducting peer reviews and conferences. S/U grading.

495G. Supervised Teaching of Writing in Disciplines. (2) (Formerly numbered 495E.) Seminar, two hours. Enforced requisite: course 495E. Required of all teaching assistants for Writing II courses not exempt by appropriate department or program training. Mentoring conferences and teaching observations, with focus on student-centered pedagogy, assessment of student writing, guidance of revision processes, and specialized writing problems that may occur in disciplinary contexts. Practical concerns of creating assignments, marking and grading essays, and conducting peer reviews and conferences. May be repeated for credit. S/U grading.

M495L. Teaching Preparation Seminar: Writing for Engineers. (2) (Formerly numbered M495E.) (Same as Engineering M495L.) Seminar, two hours. Limited to graduate students. Required of all teaching assistants for Engineering writing courses not exempt by appropriate departmental or program training. Mentoring conferences and teaching observations, with focus on student-centered pedagogy, assessment of student writing, guidance of revision processes, and specialized writing problems that may occur in engineering writing contexts. Practical concerns of preparing students to write course assignments, marking and grading essays, and conducting peer reviews and conferences. May be repeated for credit. S/U grading.

M495S. Teaching Preparation Seminar: Writing for Engineers. (2) (Formerly numbered M495F.) (Same as Engineering M495S.) Seminar, two hours. Enforced requisite: course 495E. Required of all teaching assistants for Engineering writing courses not exempt by appropriate departmental or program training. Training and mentoring, with focus on composition pedagogy, assessment of student writing, guidance of revision processes, and specialized writing problems that may occur in engineering writing contexts. Practical concerns of preparing students to write course assignments, marking and grading essays, and conducting peer reviews and conferences. S/U grading.

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M495K. Teaching Preparation Seminar: Teaching and Writing Pedagogies for Electrical Engineers. (2)
(Same as Electrical Engineering M495). Seminar, two hours. Limited to graduate electrical engineering students. Required of all departmental teaching assistants (TAs). May be taken concurrently while holding a TA appointment. Seminar on pedagogy and logistics of being a TA with emphasis on student-centered teaching, clear communication, and multimodal teaching and learning. S/U grading.

499. Academic Professionalization Colloquium. (2)
Colloquium/workshop, three hours every other week. Limited to graduate students. Rotating speakers on topics such as designing digital teaching portfolio, drafting academic/teaching curriculum vitae (CV), writing application letters for academic jobs, and pursuing alternative academic careers. Speaker sessions and panels to be followed by workshops. Revision of application letter, CV, teaching portfolio, or other relevant document to be determined in consultation with colloquium organizer. S/U grading.
Appendixes

APPENDIX A: REGULATIONS AND POLICIES

Nondiscrimination
The University of California, in accordance with applicable federal and state laws and University policies, does not discriminate on the basis of race, color, national origin, religion, sex, gender identity, pregnancy (including parenthood, childbirth, and medical conditions related to pregnancy and childbirth), physical or mental disability, medical condition (cancer-related or genetic characteristics), ancestry, marital status, age, sexual orientation, citizenship, or service in the uniformed services (including membership, application for membership, performance of service, application for service, or obligation for service in the uniformed services). The University also prohibits sexual harassment. This nondiscrimination policy covers admission, access, and treatment in University programs and activities.

Students may grieve any action that they believe discriminates against them on the ground of race, color, national or ethnic origin, alien status, sex, religion, age, sexual orientation, gender identity, marital status, veteran status, or perceived membership in any of these categories which results in injuries to the student by contacting the Office of the Dean of Students, 1104 Murphy Hall. Refer to UCLA Procedure 230.1, also available in 1104 Murphy Hall, for more information and procedures.

Inquiries regarding the University’s student-related nondiscrimination policies may be directed to the Office of the Dean of Students at 1104 Murphy Hall, by phone at 310-825-3871, or by e-mail. An assistant dean is available at this office to support students who need information or assistance in filing a discrimination complaint.

In accordance with applicable federal and state laws and University policy, including Title II of the Americans with Disabilities Act, Section 504 of the Rehabilitation Act of 1973, and the University of California policy PACAOS-20 (Policy on Nondiscrimination), UCLA does not discriminate on the basis of physical or mental disability. Retaliation for participation in University procedures relating to complaints of discrimination is also prohibited. This nondiscrimination policy covers admission, access, and treatment in University programs and activities.

UCLA is committed to prohibiting disability-based discrimination and harassment, and retaliation, performing a prompt and equitable investigation of complaints alleging discrimination, and properly remedying discrimination when it occurs. Examples of discrimination against students with disabilities include, but are not limited to: failure to engage with the student in a discussion of reasoning accommodations; failure to implement approved reasonable accommodations such as the provision of notes or extra time on tests; and exclusion of a qualified student from any course, course of study, or other educational program or activity because of the student’s disability. Disability-based harassment is conduct which is sufficiently severe, pervasive, or persistent so as to interfere with or limit an individual’s ability to participate in or benefit from the services, activities, or opportunity offers by the University.

UCLA has issued Procedure 230.2: Student Grievances Regarding Violations of Anti-Discrimination Laws or University Policies on Discrimination on Basis of Disability.

Title IX prohibits sex discrimination, including sexual harassment and sexual violence, in any education program or activity receiving federal financial assistance. Inquiries regarding the application of Title IX may be directed to the Title IX Coordinator, 2241 Murphy Hall, 310-206-3417, or the U.S. Department of Education Office for Civil Rights.

Student Conduct Policies
Students are members of both society and the academic community with attendant rights and responsibilities. Students are expected to make themselves aware of and comply with the law, and with University and campus policies and regulations. While many UCLA policies and regulations parallel federal, state, and local laws, UCLA standards may be set higher.

The University of California Policies Applying to Campus Activities, Organizations, and Students (UC Policies) have been incorporated into the UCLA Student Conduct Code either by adapting or inserting verbatim the language of the policies. Students may contact the Office of Student Conduct, Office of Ombuds Services, or Student Legal Services for advice concerning these policies.

A. Jurisdiction
The University has jurisdiction over student conduct that occurs on University property, or in connection with official University functions whether on or off University property. The University may, at its sole discretion, exercise jurisdiction over conduct that occurs off campus and that would violate student conduct when (1) the alleged misconduct indicates the student poses a threat to the safety or security of any member(s) of the University community or (2) the alleged misconduct involves academic work or the forgery, alteration, misuse of any University document, record, key, electronic device, or identification.

In determining whether or not to exercise off-campus jurisdiction, the University will consider the seriousness of the alleged misconduct; whether the alleged victim is a member of the campus community; the ability of the University to gather information, including the statements of witnesses; and whether the off-campus conduct is part of a series of actions that occurred both on and off campus.

B. Types of Misconduct
Students may be held accountable for committing or attempting to commit a violation of the UCLA Student Conduct Code or for assisting, facilitating, or participating in the planning of an act that violates this Code (or an act that would be in violation of this Code if it were carried out by a student). Violations include the following types of misconduct:

102.01: Academic Dishonesty. All forms of academic misconduct, including but not limited to cheating, fabrication or falsification, plagiarism, multiple submissions, or facilitating academic misconduct. For the purposes of the UCLA Student Conduct Code, the following definitions apply:

102.01a: Cheating. Cheating includes, but is not limited to, the use of unauthorized materials, information, or study aids in any academic exercise; the alteration of any answers on a graded document before submitting it for regrading; or the failure to observe the expressed procedures or instructions of an academic exercise (e.g., examination instructions regarding alternate seating or conversation during an examination).

102.01b: Fabrication. Fabrication includes, but is not limited to, falsification or invention of any information or citation in an academic exercise, including fabrication or falsification of research. Fabrication of research is making up data or results and recording or reporting them. Falsification of research is manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.

102.01c: Plagiarism. Plagiarism includes, but is not limited to, the use of another person’s work (including words, ideas, designs, or data), without giving appropriate attribution or citation. This includes, but is not limited to, representing, with or without the intent to deceive, part or all of an entire work obtained by purchase or otherwise, as the student’s original work; the omission of or failure to acknowledge the true source of the work; or representing an altered but identifiable work of another person or the student’s own previous work as if it were the student’s original or new work.

Unless otherwise specified by the faculty member, all submissions, whether in draft or final form, to meet course requirements (including a paper, project, take-home examination, computer program, oral presentation, or other work) must either be the student’s own work, or must clearly acknowledge the source.

102.01d: Multiple Submissions. Multiple submissions include, but is not limited to, the re-submission in identical or similar form by a stu-
dent any work which has been previously submitted for credit, whether at UCLA or any other school, college, or university in identical or similar form in one course to fulfill the requirements of a second course, or the submission by a student of any work submitted for credit in identical or similar form in one course to fulfill the requirements of a concurrent course, without the permission/consent of the instructor of both courses.

102.01e: Facilitating Academic Dishonesty. Facilitating academic dishonesty includes, but is not limited to, knowingly helping another student commit an act of academic dishonesty.

102.01f: Coercion Regarding Grading or Evaluation of Coursework. Threatening personal or professional repercussions or discipline against an instructor to coerce the instructor to change a grade or otherwise evaluate the student's work by criteria not directly reflective of coursework.

102.01g: Unauthorized Collaboration. Unauthorized collaboration means working with others without the expressed permission of the instructor on any submission, whether in draft or final form, to meet course requirements (including a paper, project, take-home examination, computer program, oral presentation, or other work). Collaboration between students will be considered unauthorized unless expressly permitted by the instructor.

102.02: Other Forms of Dishonesty. Other forms of dishonesty, including but not limited to fabricating information or knowingly furnishing false information or reporting a false emergency to the University.

102.03: Forgery. Forgery, alteration, or misuse of any University document, record, key, electronic device, or identification, or submission of any forged document or record to the University.

102.04: Theft, Damage, or Destruction of Property.

102.04a: Theft. Theft includes taking without expressed permission or misappropriation of any property or services of the University or property of others while on University premises or at official University functions; or possession of any property that the student knew or reasonably should have had knowledge was stolen.

102.04b: Damage or Destruction of Property. Damage or destruction of any University property or the property of others while on University premises or at official University functions.

102.05: Computer Misuse. Theft or abuse of University computers and other University electronic resources such as computer and electronic communications facilities, systems, and services. Abuses include, but are not limited to, unauthorized entry, use, transfer, or tampering with the communications of others; use of either software or physical devices to enroll in classes for yourself or on behalf of others using processes other than those specifically delineated by the UCLA Registrar's Office; interference with the work of others and with the operation of computer or electronic communications facilities, systems, and services; or violations of copyright laws, whether by theft, unauthorized sharing, or other misuse of copyrighted materials such as songs, movies, software, photos, or text. Violation of the University of California Electronic Communications Policy or of any other University acceptable or allowable use policy is also considered a violation of Section 102.05.

102.06: Unauthorized Use of University Resources or Name. Unauthorized entry to, possession of, receipt of, or use of any University services, equipment, resources, or properties, including the University's name, insignia, or seal.

102.07: Violations of University Policy. Students may be subject to discipline for violation of any University policy.

102.07a: University Housing. Violations of policy regarding University-owned, -operated, or -leased housing facilities located on University property.

102.07b: University Parking. Violations of policy regarding University parking services or University-owned or -operated parking facilities.

102.07c: University Recreation. Violations of policy regarding University recreation services, programs, or within University-owned or -operated recreation facilities.

102.07d: University Identification Card (BruinCard). Violation of policies, regulations, or rules governing use of official University identification cards, including manufacturing or possession of false identification cards, using another person's BruinCard to obtain services or establish identity, facilitating the misuse of one's BruinCard by another person to obtain services or establish identity, or other misuse of the BruinCard.

102.08: Conduct that Threatens Health or Safety. Conduct that threatens the health or safety of any person, including oneself. This includes, but is not limited to, physical assault, sexual misconduct, domestic violence, dating violence, threats that cause a person reasonably to be in sustained fear for one's own safety or the safety of her or his immediate family, incidents involving the use or display of a weapon likely to cause great bodily harm, and intoxication or impairment through the use of alcohol or controlled substances to the point one is unable to exercise care for one's own safety, or other conduct that threatens the health or safety of any person. For incidents involving allegations of sexual violence (including domestic violence, dating violence, and sexual assault), see the UC Policy on Sexual Violence and Sexual Harassment (hereafter referred to as the SVSH Policy).

102.09: Sexual Harassment.

For incidents involving allegations of sexual harassment, see the SVSH Policy.

102.10: Stalking. Stalking is behavior in which a student repeatedly engages in a course of conduct directed at another person and makes a credible threat with the intent to place that person in reasonable fear for his or her safety, or the safety of his or her family, where the threat is reasonably determined by the University to seriously alarm, torment, or terrorize the person, and where the threat is additionally determined by the University to serve no legitimate purpose.

The UCLA Student Conduct Code prohibits retaliation against a person who reports stalking, assists someone with a report of stalking, or participates in any manner in an investigation or resolution of a stalking report. Retaliation includes threats, intimidation, reprisals, and/or adverse actions related to employment or education.

For stalking violations of a sexual nature, see the SVSH Policy.

102.11: Harassment. Harassment is defined as conduct that is so severe and/or pervasive, and objectively offensive, and that so substantially impairs a person's access to University programs or activities that the person is effectively denied equal access to the University's resources and opportunities.

Sanctions may be enhanced where an individual was selected for harassment because of the individual's race, color, national or ethnic origin, citizenship, sex, religion, age, sexual orientation, gender identity, pregnancy, marital status, ancestry, service in the uniformed services, physical or mental disability, medical condition, or perceived membership in any of these classifications.

For violations involving sexual harassment and sexual violence (including domestic violence, dating violence, and sexual assault), see the SVSH Policy.

102.12: Hazing. Participating in, engaging in, or supporting hazing or any method of initiation or preinitiation into a campus organization or other activity engaged in by the organization or members of the organization at any time that causes, or is likely to cause, physical injury or personal degradation or disgrace resulting in psychological harm to any student or other person.

102.13: Obstruction or Disruption. Obstruction or disruption of teaching, research, administration, disciplinary procedures, or other University activities.

102.14: Disorderly Behavior. Engaging in disorderly or lewd conduct.

102.15: Disturbing the Peace. Participation in a disturbance of the peace or unlawful ass-embly.

102.16: Failure to Comply. Failure to identify oneself to, or comply with directions of, a University official or other public official acting in the performance of her or his duties while on University property or at official University functions, or resisting or obstructing such Uni-
102.17: Controlled Substances. Manufacture, distribution, dispensing, possession, use, or sale of, or the attempted manufacture, distribution, dispensing, or sale of controlled substances (including medicinal marijuana), identified in federal and state laws or regulations, which is unlawful or otherwise prohibited, or not in compliance with, any University policy or campus regulations or being unable to exercise care for one's own safety because one is under the influence of controlled substances.

NOTE: This provision shall not apply to circumstances wherein the person under the influence was given a controlled substance without her or his knowledge and permission.

102.18: Alcohol. Manufacture, distribution, dispensing, possession, use, or sale of, or the attempted manufacture, distribution, dispensing, or sale of alcohol which is unlawful or otherwise prohibited by, or not in compliance with, University policy or campus regulations, or being unable to exercise care for one's own safety because one is under the influence of alcohol. NOTE: This provision shall not apply to circumstances wherein the person under the influence was given alcohol without her or his knowledge and permission.

102.19: Destructive Devices. Possession, use, storage, or manufacture of explosives, firebombs, or other destructive devices.

102.20: Weapons and Replica Weapons.

102.20a: Weapons. Except as expressly permitted by law, possession, use, storage, or manufacture of a firearm or other weapon capable of causing bodily injury is prohibited.

102.20b: Replica Weapons. Except as expressly permitted by UCPD policy, possession, use, storage, or manufacture of replicas of firearms or other weapons is prohibited.

102.21: Violation of Disciplinary Conditions. Violation of the conditions contained in the terms of a disciplinary action imposed under the UCLA Student Conduct Code.

102.22: Violation of Interim or Emergency Suspension Conditions. Violation of the conditions contained in a written Notice of Interim or Emergency Suspension issued pursuant to Section IV of the UCLA Student Conduct Code.

102.23: Unauthorized Use or Sale of University Materials. Except as provided herein, no student shall give, sell, or otherwise distribute to others or publish any recording made during any course presentation without the written consent of the University and the instructor/presenter. This policy is applicable to any recording in any medium, including handwritten or typed notes.

Any distribution of a recording of a course presentation at UCLA that captures the actual sounds and/or images of that course presentation, in any medium, must consider not only the rights of the instructor and the University, but also those of other parties. Examples include the privacy rights of students enrolled in the course, the rights of guest lecturers, and the copyright interests in materials authored by others that are displayed or presented during the course presentation. In addition to the consent of the University and the instructor/presenter, it may be necessary to secure permission from these other parties before any recording, distribution, publication, or communication is legally permitted.

102.23a: Selling Academic Materials. Selling, preparing, or distributing for any commercial purpose academic materials, including but not limited to written, video, or audio recordings of any course unless authorized by the University in advance and explicitly permitted by the course instructor in writing. The unauthorized sale or commercial distribution of academic materials, including but not limited to recordings, by a student is a violation of the UCLA Student Conduct Code whether or not it was the student or someone else who prepared the notes or recordings. This policy is applicable to any recording in any medium, including handwritten or typed notes.

102.23b: Copying Course Notes. Copying for any commercial purpose handouts, readers, or other course materials provided by an instructor as part of a University of California course unless authorized by the University in advance and explicitly permitted by the course instructor or the copyright holder in writing (if the instructor is not the copyright holder). Students currently enrolled in a course may provide a copy of their own notes or recordings to other currently enrolled students for noncommercial purposes reasonably arising from participation in the course, including individual or group study.

102.23c: Commencement Tickets. Selling commencement tickets.

102.24: Misuse of University Property. Organizing or carrying out unlawful activity on University property.

102.25: Violations of Law. Students may be subject to discipline on the basis of a conviction under any federal, California state, or local criminal law, when the conviction constitutes reasonable cause to believe that the student poses a threat to the health or safety of any person, or to the security of any property, on University premises or at official University functions, or to the orderly operation of the campus.

102.26: Terrorizing Conduct. Conduct, where the actor means to communicate a serious expression of intent to terrorize, or acts in reckless disregard of the risk of terrorizing, one or more University students, faculty, or staff. Terrorizing means to cause a reasonable person to fear bodily harm or death, perpetrated by the actor or those acting under his/her control. Reckless disregard means consciously disregarding a substantial risk. This section applies without regard to whether the conduct is motivated by race, ethnicity, personal animosity, or other reasons. This section does not apply to conduct that constitutes the lawful defense of oneself, of another, or of property.

102.27: Unwanted Personal Contact. Contact (whether physical, verbal, written, face-to-face, telephonic, electronic, or by other means) that (1) a student knows or should know is unwanted, (2) is communicated directly to one or more specific students, faculty, or staff, (3) constitutes severe and/or pervasive, and objectively offensive, conduct, and (4) does not constitute speech protected by the First Amendment to the U.S. Constitution (e.g., speech in a public forum on a matter of public concern).

102.28: Expectation of Privacy. The following is prohibited:

Making a video recording, audio recording, taking photographs, or streaming audio/video of any person in a location where the person has a reasonable expectation of privacy, without that person's knowledge and express consent.

Making a video recording, audio recording, or streaming audio/video of private nonpublic conversations and/or meetings, without the knowledge and express consent of all recorded parties.

Looking through a hole or opening, into, or otherwise viewing, by means of any instrumentality, the interior of a private location without the subject's knowledge and express consent.

Express consent is clear, unmistakable, and voluntary consent that may be in written, oral, or nonverbal form.

Private locations are settings where the person reasonably expected privacy. For example, in most cases the following are considered private locations: residential living quarters, bathrooms, locker rooms, and personal offices.

Private nonpublic conversations and/or meetings include any communication carried on in circumstances that reasonably indicate that any party wants the communication to be confined to the parties, but excludes a communication made in a public gathering, or in any other circumstance in which the parties to the communication may reasonably expect that the communication may be overheard or recorded.

These provisions do not extend to public events or discussions, nor to lawful official law or policy enforcement activities. These provisions may not be utilized to impinge on the lawful exercise of constitutionally protected rights of freedom of speech or assembly.

Sexual Assault and Other Sexual Violence

UCLA does not tolerate sexual violence and responds to all reports of sexual violence in accordance with UCLA procedures and the UC Policy on Sexual Violence and Sexual Harassment. Sanctions for a student found responsible for committing sexual assault or other sexual violence may include dismissal from the University. See the Sexual Violence Prevention and Response policies web page.
If a Person Has Been Sexually Assaulted

Those who believe that they are the victims of sexual assault should

1. **Immediately call the police department.** If possible, call the UCLA Police Department at 310-825-1491 or 911.

2. **Get medical attention.** Campus police will provide transportation to the Rape Treatment Center at Santa Monica-UCLA Medical Center for medical treatment and evidence collection. A confidential counselor from the Rape Treatment Center will be available at that time, free of charge.

3. **Report to Title IX.** You have the right to report to the University, and you can do that by contacting the Title IX Office by email or by calling 310-206-3417. If the other person is a student or employee, the Title IX Office can take administrative action, and the Title IX Office can explain those options to you. The Title IX Office may be able to help through interim measures so individuals do not experience harassment or sexual violence. Those measures can include, for example, a no contact directive prohibiting contact.

Utilize confidential campus and community support services:

1. **Contact a Campus Assault Resources and Education (CARE) advocate.** CARE Advocates are available to support and advocate for UCLA victims or survivors. They can discuss options and alternatives, help identify the most appropriate support services, and provide information about medical care, psychological counseling, academic assistance, legal options, how to file a police report, and how to file a complaint with the Title IX Office. CARE advocates are available to assist any member of the UCLA community regardless of where or when the assault occurred. For assistance, contact CARE at 310-206-2465 or go to Wooden Center West First Floor and ask to speak to a CARE advocate.

2. **Contact the Rape Treatment Center** at Santa Monica-UCLA Medical Center (424-259-7208) for free emergency medical treatment and counseling services.

Caring assistance is available for persons who have been subjected to sexual violence. They are encouraged in the strongest terms to make a report to the Title IX Office.

**Harassment**

**Sexual Harassment**

The University of California is committed to creating and maintaining a community where all persons who participate in University programs and activities can work and learn together in an atmosphere free from all forms of harassment, exploitation, or intimidation. Every member of the University community should be aware that the University is strongly opposed to sexual harassment and that such behavior is prohibited both by law and by the UC Policy on Sexual Violence and Sexual Harassment (hereafter referred to as the SVSH Policy). The University will respond promptly and effectively to reports of sexual harassment and will take appropriate action to prevent, correct and, if necessary, discipline behavior that violates the SVSH Policy. See the Title IX Sexual Harassment Prevention website.

**Definitions**

For detailed definitions of sexual harassment, refer to the SVSH Policy.

**Complaint Resolution**

An individual who believes that they have been sexually harassed may contact the Title IX Coordinator, 2241 Murphy Hall, 310-206-3417. If a student reports sexual harassment or sexual violence to a responsible employee, as defined under the SVSH Policy, the responsible employee must report it to the Title IX Coordinator. Responsible employees include academic personnel, faculty members, and most other employees who are not defined as a confidential resource under the SVSH Policy.

Title IX prohibits sex discrimination, including sexual harassment and sexual violence, in any education program or activity receiving federal financial assistance. Inquiries regarding Title IX may be directed to the Title IX Coordinator, 2241 Murphy Hall, 310-206-3417, or the U.S. Department of Education Office for Civil Rights.

**Other Forms of Harassment**

The University strives to create an environment that fosters the values of mutual respect and tolerance and is free from discrimination based on race, ethnicity, sex, religion, sexual orientation, disability, age, and other personal characteristics. Certainly harassment, in its many forms, works against those values and often corrodes a person's sense of worth and interferes with one's ability to participate in University programs or activities. While the University is committed to the free exchange of ideas and the full protection of free expression, the University also recognizes that words can be used in such a way that they no longer express an idea, but rather injure and intimidate, thus undermining the ability of individuals to participate in the University community. The University of California Policies Applying to Campus Activities, Organizations, and Students (hereafter referred to as Policies) presently prohibit a variety of conduct by students which, in certain contexts, may be regarded as harassment or intimidation.

For example, harassing expression which is accompanied by physical abuse, threats of violence, or conduct that threatens the health or safety of any person on University property or in connection with official University functions may subject an offending student to University discipline under the provisions of the Policies.

Similarly, harassing conduct, including symbolic expression, which also involves conduct resulting in damage to or destruction of any property of the University or property of others while on University premises may subject a student violator to University discipline under the provisions of Section 102.04 of the Policies.

Further, under specific circumstances described in Section 102.11 of the Policies, students may be subject to University discipline for misconduct which may consist solely of expression. Copies of these Policies are available in the Office of Student Conduct, Suite 104 Murphy Hall.

**Complaint Resolution**

One of the necessary measures in our efforts to assure an atmosphere of civility and mutual respect is the establishment of procedures which provide effective informal and formal mechanisms for those who believe that they have been victims of any of the above misconduct. Many incidents of harassment and intimidation can be effectively resolved through informal means. For example, an individual may wish to confront the alleged offender immediately and firmly. An individual who chooses not to confront the alleged offender and who wishes help, advice, or information is urged to contact the Office of Student Conduct.

In addition to providing support for those who believe they have been victims of harassment, the Office of Student Conduct can help students to consider which of the available options is the most useful for the particular circumstances. With regard to the Universitywide Student Conduct Harassment Policy, complainants should be aware that not all conduct which is offensive may be regarded as a violation of this Policy and may, in fact, be protected expression. Thus, the application of formal institutional discipline to such protected expression may not be legally permissible. Nevertheless, the University is committed to reviewing any complaint of harassing or intimidating conduct by a student and intervening on behalf of the complainant to the extent possible.

**Faculty Code of Conduct**

The entire Faculty Code of Conduct, as well as any updates, can be found in the Academic Personnel Manual of the University of California. Part IIA of the Faculty Code of Conduct outlines faculty obligations to students and reads as follows:

**Teaching and Students**

**Ethical Principles:** “As teachers, the professors encourage the free pursuit of learning of their students. They hold before them the best scholarly standards of their discipline. Professors demonstrate respect for students as individuals and adhere to their proper roles as intellectual guides and counselors. Professors make every reasonable effort to foster honest academic conduct and to assure that their evaluations of students reflect each student’s true merit. They respect the confidential nature of the relationship between professor and student. They avoid any exploitation, harassment, or discriminatory treatment of students. They
acknowledge significant academic and scholarly assistance from them. They protect their academic freedom." (from 1966 AAUP statement, revised 1987)

**Types of Unacceptable Conduct**

Failure to meet the responsibilities of instruction, including (1) arbitrary denial of access to instruction, (2) significant intrusion of material unrelated to the course, (3) significant failure to adhere, without legitimate reason, to the rules of the faculty in the conduct of courses, to meet class, to keep office hours, or to hold examinations as scheduled, (4) evaluation of student work by criteria not directly reflective of course performance, (5) undue and unexcused delay in evaluating student work.

Discrimination, including harassment, against a student on political grounds or for reasons of race, religion, sex, sexual orientation, gender, gender expression, gender identity, ethnic origin, national origin, ancestry, marital status, pregnancy, physical or mental disability, medical condition, genetic information, status as a covered veteran or, within the limits imposed by law or University regulations, because of age or citizenship or for other arbitrary or personal reasons.

Violation of University policy, including the pertinent guidelines, applying to nondiscrimination against students on the basis of disability.

Use of the position or powers of a faculty member to coerce the judgment or conscience of a student or to cause harm to a student for arbitrary or personal reasons.

Participating in or deliberately abetting disruption, interference, or intimidation in the classroom.

Entering into a romantic or sexual relationship with any student for whom a faculty member has, or should reasonably expect to have in the future, academic responsibility (instructional, evaluative, or supervisory).

Exercising academic responsibility (instructional, evaluative, or supervisory) for any student with whom a faculty member has a romantic or sexual relationship.

**Charges of Violation**

If a student has reason to believe that a faculty member has violated the Faculty Code of Conduct and that formal discipline may be warranted, the alleged violator should be reported to the chair of the department and to the dean of the division or school with a request that a summary of the alleged violation be filed with the Academic Senate Charges Committee. If the dean, in consultation with the vice chancellor of Academic Personnel, determines that there are not sufficient grounds for the administration to file a charge, the student may, after discussing the matter with the Office of Ombuds Services and a member of the Academic Senate Grievance Advisory Committee, file such a charge in person if the student continues to feel it is warranted.

**Residence for Tuition Purposes**

Students who have not been living in California with intent to make it their permanent home for more than one year immediately before the residence determination date for each term in which they propose to attend the University must pay nonresident supplemental tuition in addition to all other fees. The residence determination date is the day instruction begins at the start of the residence period. If a student has reason to believe that a faculty member has violated the Faculty Code of Conduct, file such a charge in per-

**Who Is a Resident?**

Persons who have not been living in California with intent to make it their permanent home for more than one year immediately before the residence determination date for each term in which they propose to attend the University must pay nonresident supplemental tuition in addition to all other fees. The residence determination date is the day instruction begins at the start of the University of California campuses to open for the quarter, and for schools on the semester system, the day instruction begins for the semester.

**Establishing Intent to Become a California Resident**

Indications of students’ intent to move to and become a California resident include the following: (1) registering to vote and voting in California elections, (2) designating California as their permanent address on all school and employment records, including military records or (3) obtaining a California Driver License Card, or if they are not drive, a California Identification Card, (4) obtaining California vehicle registration, (5) paying California income taxes as a resident, including taxes on income earned outside California from the date they establish residence, (6) establishing a California residence in which they keep their personal belongings, and (7) licensing for professional practice in California.

The absence of these indicia in other states during any period for which students claim residence can also serve as an indication of their intent. Documentary evidence is required, and all relevant indications are considered in determining the classification. Intent is questioned if students return to their prior state of residence when the University is not in session.

**General Rules Applying to Minors**

If students are unmarried minors (under age 18), the residence of the parent with whom they live is considered to be their residence. If they have a parent living, they cannot change their residence by their own act, by the appointment of a legal guardian, or by the relinquishment of their parent’s right of control. If students live with neither parent, their residence is that of the parent with whom they last lived. Unless they are minor aliens present in the U.S. under the terms of a nonimmigrant visa that precludes them from establishing a domicile in the U.S.. students may establish their own residence when both their parents are deceased and a legal guardian has not been appointed. If they derive California residency from a parent, that parent must satisfy the one-year durational residence requirement.
Specific Rules Applying to Minors

Divorced or Separated Parents

Minor U.S. citizens or eligible aliens may be able to derive California resident status from a California resident parent if they move to California to live with that parent before their 18th birthday. If they begin residing with their California parent after their 18th birthday, they are treated like any other adult student coming to California to establish residence.

Parent of Minor Moves from California

Students may be entitled to resident status if they are minor U.S. citizens or eligible aliens whose parent(s) was a resident of California who left the state within one year of the residence determination date if (1) they remained in California after their parent(s) departed, (2) they enroll in a California public postsecondary institution within one year of their parent(s) departure, and (3) once enrolled, they maintain continuous attendance in that institution. Financial independence is not required in this case.

Two-Year Care and Control

A minor or 18-year-old student may be entitled to resident classification if, immediately prior to enrolling in a postsecondary institution, they have been living with and been under the continuous direct care and control of an adult or adults other than a parent for a period of no less than two years. The adult or adults having control must have been residents of California during the one year immediately prior to the residence determination date. The classification continues until students have attained the age of 19 and have lived in the state the minimum time necessary to become a resident, so long as continuous full-time attendance is maintained at a public postsecondary institution.

Self-Support

If students are U.S. citizens or eligible aliens and are minors who can prove that they lived in California for the entire year immediately before the residence determination date, that they have been self-supporting for that year, and that they intend to make California their permanent home, they may be eligible for resident status.

Exemptions from Nonresident Supplemental Tuition

Member of the U.S. Armed Forces

Members of the U.S. Armed Forces may be exempt from nonresident supplemental tuition unless their assignment to California is for the purpose of attending a state-supported institution of higher education. Graduate and professional students are eligible for this exemption for two years, during which time they must fulfill the UC residence requirements in order to maintain their resident status. They must provide the residence deputy on campus with a statement from their commanding officer or personnel officer stating that their assignment to active duty in California is not for educational purposes. The letter must include the dates of their assignment to the state.

Undergraduate students discharged from military service after having been stationed in California on active duty for at least 366 days are entitled to resident classification for the minimum time necessary to establish residence (366 days). In this case, financial independence is not a requirement.

Some members of the U.S. Armed Forces may qualify for an exemption from nonresident supplemental tuition based on the federal Higher Education Opportunity Act of 2008. Under this Act, undergraduate and graduate students who are members of the U.S. Armed Forces on active duty for a period of more than 30 days and whose domicile or permanent duty station is in California, are entitled to an exemption from nonresident supplemental tuition. Students must be continuously enrolled at the University, notwithstanding a subsequent change in their permanent duty station to a location outside of California.

Effective July 2015, certain nonresident veterans (and their dependents) who were separated from U.S. military service within 36 months of enrolling at UC and are eligible for G.I. Bill (Post-9/11 or Montgomery) program funds may qualify for an exemption from nonresident supplemental tuition.

Spouse, Registered Domestic Partner, or Other Dependents of Military Personnel

Students are exempt from payment of nonresident supplemental tuition if they are a spouse, registered domestic partner, or natural or adopted child or stepchild who is a dependent of a member of the U.S. Armed Forces stationed in California on active duty. Graduate and professional students are eligible for the exemption only until they have resided in the state the minimum time necessary to become a resident (366 days). Students must petition for a waiver of nonresident supplemental tuition each term they are eligible. If they are enrolled in an educational institution and the member of the Armed Forces is transferred on military orders to a place outside California where he or she continues to serve in the Armed Forces, or the member of the Armed Forces retires from active duty immediately after having served in California on active duty, they may retain this exemption under conditions listed above.

Some dependents of members of the U.S. Armed Forces may qualify for an exemption from nonresident supplemental tuition based on the federal Higher Education Opportunity Act of 2008. Under this Act, undergraduate or graduate students who are the spouse, registered domestic partner, or dependent child of a member of the U.S. Armed Forces stationed in California on active duty for a period of more than 30 days and whose domicile or permanent duty station is in California, are entitled to an exemption from nonresident supplemental tuition. Students must be continuously enrolled at the University, notwithstanding a subsequent change in the U.S. Armed Forces member's permanent duty station to a location outside of California.

Child, Spouse, or Registered Domestic Partner of Faculty Member

To the extent funds are available, if students are an unmarried dependent child under age 21, spouse, or registered domestic partner of a member of the University faculty who is a member of the Academic Senate, they may be eligible for a waiver of nonresident supplemental tuition. Confirmation of the faculty member's membership on the Academic Senate must be secured each term this waiver is granted.

Child, Spouse, or Registered Domestic Partner of University Employee

Students may be entitled to resident classification if they are an unmarried dependent child, spouse, or registered domestic partner of a full-time University employee whose assignment is outside California (e.g., Los Alamos Scientific Laboratory or University of California Washington, DC, Center). Their parent's, spouse's, or registered domestic partner's employment status with the University must be ascertained each term.

Child, Spouse, or Registered Domestic Partner of Deceased Public Law Enforcement or Fire Suppression Employee

Students may be entitled to a waiver of nonresident supplemental tuition if they are the child, spouse, or registered domestic partner of a deceased public law enforcement or fire suppression employee who was a California resident at the time of his or her death and who was killed in the course of fire suppression or law enforcement duties.

Dependent Child of a California Resident

If students have not been an adult resident of California for more than one year and are the natural or adopted dependent child of a California resident who has been a resident for more than one year immediately prior to the residence determination date, they may be entitled to a waiver of nonresident supplemental tuition until they have resided in California the minimum time necessary to become a resident, so long as continuous full-time attendance is maintained at an institution.

Native American Graduate of a Bureau of Indian Affairs High School

Students who are graduates of a California high school operated by the federal Bureau of Indian Affairs may be exempt from nonresident supplemental tuition.

Employee of a California Public School District

Students holding a valid credential authorizing service in the public schools of the State of California who are employed by a school district in a full-time certificate position may be exempt from nonresident supplemental tuition.

Student Athlete in Training at the U.S. Olympic Training Center, Chula Vista

Any amateur student athletes in training at the U.S. Olympic Training Center in Chula Vista may be exempt from nonresident supplemental tuition until they have resided in California.
Graduate of a California High School

Students who attended high school in California for three or more years (9th grade included) or attained credits/units earned in California from a California high school equivalent to three or more years of full-time high school coursework and attended a combination of elementary, middle, and/or high school (K-12) in California for a total of three or more years, and graduated from a California high school (or attained the equivalent, such as a High School Equivalency Certificate issued by the California state GED Office or a Certificate of Proficiency resulting from the California High School Proficiency Examination), may be exempt from nonresident supplemental tuition. Nonimmigrant alien students are not eligible for the exemption.

Recipients of the Congressional Medal of Honor and Their Children under Age 28

Undergraduate students who are recipients of the Congressional Medal of Honor or who are the children of a recipient may be exempt from nonresident supplemental tuition. Recipients must be California residents, and students must be under age 28. Students’ annual income must not exceed the national poverty level. If the recipient was a parent who died, the parent must have been a California resident at the time of death.

Dependents or Wards of State through California’s Child Welfare System

Notwithstanding any other provisions, students who reside in California and are 19 years of age or under at the time of enrollment, and who are currently dependents or wards of the state through California’s child welfare system, or were served by California’s child welfare system and are no longer being served either due to emancipation or aging out of the system, shall be entitled to a resident classification as long as they remain continuously enrolled.

Temporary Absences

If persons are nonresident students who are in the process of establishing a residence for tuition purposes and they return to their former home during noninstructional periods, their presence in the state is presumed to be solely for educational purposes and only convincing evidence to the contrary rebuts this presumption. Students who are in the state solely for educational purposes are NOT classified as residents for tuition purposes regardless of the length of their stay.

If persons are students who have been classified as residents for tuition purposes and they leave the state temporarily, their absence could result in the loss of their California residence. The burden is on students (or their parents if they are minors) to verify that they did not do things inconsistent with their claim of a continuing California residence during their absence. Steps that students (or their parents) should take to retain a California residence include the following:

1. Continue to use a California permanent address in all records—educational, employment, military, etc.
2. Continue to satisfy California tax obligations. If students are claiming California residence, they are liable for payment of income taxes on their total income from the date they establish their residence in the state, including income earned in another state or country.
3. Retain California voter registration and vote by absentee ballot.
4. Maintain a California Driver License and vehicle registration. If it is necessary to change the driver’s license or vehicle registration, students must change them back within the time prescribed by law.

Petition for Residence Classification

Students may obtain a petition from the Registrar’s website for a change of classification from nonresident to resident status. All changes of status must be initiated at least three weeks in advance of the fee payment deadline for the applicable term.

Time Limitation on Providing Documentation

If additional documentation is required for residence classification but is not readily accessible, students are allowed until the end of the applicable term to provide it.

Incorrect Classification

Students who were incorrectly classified as residents are subject to nonresident classification and to payment of all nonresident tuition fees not paid. If they concealed information or furnished false information and were classified incorrectly as a result, they are also subject to University discipline. Resident students who become nonresidents must immediately notify the residence deputy.

Inquiries and Appeals

Inquiries regarding residence requirements, determination, and/or recognized exceptions should be directed to the Residence Deputy, UCLA Registrar’s Office, 1113 Murphy Hall, Box 951429, Los Angeles, CA 90095-1429, 310-825-3447.

Students are cautioned that this summary is NOT a complete explanation of the law regarding residence. Note that changes may be made in the residence requirements between the publication of this statement and the relevant residence determination date.

Students may appeal a campus nonresident determination to the Office of the General Counsel only on the grounds and within the deadline specified below.

Grounds for Appeal

1. The decision to classify students as nonresidents for purposes of tuition was based on (a) a significant error of fact, (b) a significant procedural error, or (c) an incorrect application of policy that, if corrected, would require that the students be reclassified as residents.
2. Significant new information became available after the date of the campus decision classifying the students as nonresidents; despite the exercise of reasonable diligence (care and attention) the information was not previously known or available to the students; and, based on the new information classification as nonresidents is incorrect.

No appeals based solely on disagreement with the campus decision are acceptable.

Appeal Deadline

The Office of the General Counsel must receive the appeal from students within 30 days of the date of the campus decision notifying students of the nonresident classification. Send the completed Application to Appeal and a copy of the nonresident decision by (1) e-mail to the Residency Analyst, (2) fax to 510-987-9757, or (3) mail to Residency Analyst, UC Office of General Counsel, 1111 Franklin Street, 8th Floor, Oakland, CA 94607-5200. No other university personnel are authorized to supply information relative to residence requirements for tuition purposes.

Privacy Notice

All of the information requested on the statement of Legal Residence form is required for determining whether or not students are legal residents for tuition purposes. Registration cannot be processed without this information. The Registrar’s Office on campus maintains the requested information. University of California policies governing residency for tuition purposes are established by the Regents pursuant to and implemented by regulations established by the President, in consultation with the G-enerai Counsel (Regents Standing Order 110.2; Regents policies 3105 and 3106). Students have the right to inspect University records containing the residence information requested on the form.

Financial Aid Standards for Satisfactory Academic Progress

UCLA Financial Aid and Scholarships establishes standards for satisfactory academic progress to measure students’ progress toward degree completion using both qualitative and quantitative methods in accordance with federal regulations. To be eligible for financial aid, students must meet or exceed these standards. Failure to maintain these standards may result in suspension of financial aid eligibility. The standards are as strict or more strict than the UCLA standards for a student enrolled in the same educational program who is not receiving Title IV assistance. See the Standards for Satisfactory Academic Progress Guide.

Qualitative Standard

Undergraduate students must maintain a cumulative grade-point average (GPA) of 2.0; graduate students must maintain a cumulative grade-point average of 3.0.
Quantitative Standard
Students must complete a minimum of 67 percent of cumulative coursework attempted.

Maximum Timeframe
Units attempted or total enrolled terms may not exceed 150 percent of the published length of students’ programs.

Change of Academic Major/ Pursuit of Double Major or Minor
Students who have a change of academic major or pursue a double major or minor do not have additional financial aid eligibility beyond the maximum timeframe established in this policy.

Successful Completion of Units
To successfully complete units, students must receive a grade of A, B, C, D, or P (S for graduate students) in each course. Grades of F, I, NP (U for graduate students), NR (No Report), and DR (Deferred Report) do not count as successful completion of coursework attempted.

The standards for satisfactory academic progress apply to all coursework attempted, including coursework for which students did not receive financial aid.

Cancellations
Cancellation of registration on or before the first day of classes does not count as units attempted.

English as a Second Language and Summer Sessions Coursework
English as a Second Language (ESL) and Summer Sessions coursework counts as units attempted and toward the cumulative grade-point average.

Remedial Coursework
Remedial coursework counts as units attempted but does not count toward the cumulative grade-point average.

Repeat Coursework
Repeated courses and grade-point average are treated in accordance with the University’s academic policy as outlined in this catalog. If the Registrar’s Office counts repeat coursework as attempted/completed, this counts equally for academic progress standards. Financial Aid and Scholarships determines if students are eligible for aid for repeat coursework.

Transfer Coursework
Coursework accepted for transfer credit counts as both units attempted and completed and has no affect on grade-point average unless the coursework is transferred from another UC campus.

Withdrawals
Withdrawals after the first day of classes during a term count as units attempted unless students do not attend any classes for the given term and receive a 100 percent refund of all fees.

Evaluation
Academic progress is evaluated annually after winter quarter grades are available. For students on probation and for students who are required to follow an academic plan (see below), academic progress is evaluated each term.

Suspension
Students who fail to meet the standards for satisfactory academic progress are placed on suspension and are no longer eligible to receive financial aid. Suspected students are notified through their MyUCLA account.

Appeal Process
Students who have their financial aid suspended may submit a written appeal using the Satisfactory Academic Progress Appeal form. When filing an appeal, they must provide a full explanation along with documentation, verifying the circumstances that led to their inability to meet the standards for satisfactory academic progress. Before filing an appeal, students should seek assistance from an academic advisor to explore ways to eliminate deficiencies and establish a realistic plan toward graduation. Refer to the appeal instruction packet for specific examples of valid reasons for an appeal.

Appeal Deadline
Appeals must be submitted to Financial Aid and Scholarships prior to the last day of the term for which students are appealing to have aid reinstated. Appeals are not considered retroactively. Refer to the appeal instruction packet for priority deadlines.

Denied Appeals
If the appeal is denied, students may file a secondary appeal and submit additional information that may help explain the circumstances by which they were not able to maintain the standards for satisfactory academic progress. They are notified of the decision of the secondary appeal in writing; the decision is final.

Probation
Students who have an appeal approved are placed on probation and their academic progress monitored on a quarterly basis to ensure that they meet the conditions of their academic plan.

Reinstatement
Students who have had their aid eligibility suspended for failing to maintain the standards for satisfactory academic progress, or who have a denied satisfactory academic progress appeal, may regain financial aid eligibility by becoming compliant with the qualitative and quantitative components of the academic progress standards. Students who exceed the maximum timeframe cannot regain eligibility through the reinstatement process.

Academic Plans
If students are required to submit an academic plan as a condition of their approved appeal, their financial aid cannot be disbursed until Financial Aid and Scholarships confirms that they are adhering to their academic plan. Students on an academic plan are evaluated each term. Their ability to adhere to the units and courses specified in their academic plan is closely monitored. Failure to adhere to their academic plan causes delays in their aid being disbursed and may result in suspension of their financial aid eligibility.

Professional Schools
Students attending the Schools of Dentistry, Law, Management, Medicine, and University Extension are covered by criteria established by the respective school.

Grading Regulations
Assigning a Grade
The instructor in charge of a course is responsible for determining the grade of each student in the course. The standards for evaluating student performance are based on the course description as approved by the appropriate course committee.

The final grade in the course is based on the instructor’s evaluation of the student’s achievement in the course. When on an examination or other work submitted by a student, the student is suspected of having engaged in plagiarism or otherwise cheating, the suspected infraction is to be reported to the appropriate administrative officer of the University for consideration of disciplinary proceedings against the student. Until such proceedings, if any, have been completed, the grade DR (Deferred Report) is assigned for that course. If in such disciplinary proceedings it is determined that the student did engage in plagiarism or otherwise cheat, the administrative officer, in addition to imposing discipline, reports back to the instructor of the course involved, the nature of the plagiarism or cheating. In light of that report, the instructor may replace the grade DR with a final grade that reflects an evaluation of that which may fairly be designated as the student’s own achievement in the course as distinguished from any achievement that resulted from plagiarism or cheating.

Grade Complaints
A grade may be appealed, on any reasonable grounds, to the instructor, the chair of the department, and the dean of the division or school.

If the student believes that the instructor has violated the Faculty Code of Conduct by assigning the grade on any basis other than academic grounds, the matter should first be taken up with the instructor. If the matter is not resolved, the student may go for counsel to the Office of Ombuds Services or may follow the procedures for the formal filing of charges (see Faculty Code of Conduct earlier in the Appendix). If a charge is sustained by the Academic Senate Committees on Charges and on Privilege and Tenure, an ad hoc committee is appointed within two weeks to review the disputed grade, and any warranted change is made within four weeks.

Correction of Grades
All grades, except DR, I, and IP, are final when filed by the instructor in the end-of-term
course report. However, the Registrar's Office is authorized to change a final grade (1) on written request of an instructor, provided that a clerical or procedural error is the reason for the change or (2) on written request of the chair of the UCLA Academic Senate in cases where it has been determined by the Committee on Privilege and Tenure that an instructor has assigned a grade on any basis other than academic grounds. No change of grade may be made on the basis of re-examination or, with the exception of the I and IP grades, the completion of additional work. Any grade change request made by an instructor must be countersigned by the department chair. Any grade change request made by an instructor who has left the University must be countersigned by the department chair. No grade change may be made once a student has graduated. All grade changes are recorded on the transcript.

**Policy on Alternate Examination Dates**

In compliance with Section 92640(a) of the California Education Code, the University must accommodate requests for alternate examination dates for any test or examination at a time when that activity would not violate a student's religious creed. This requirement does not apply in the case of an instructor administering the test or examination at an alternate time who would impose an undue hardship that could not reasonably be avoided. Accommodation for alternate examination dates is worked out directly and on an individual basis between the student and the faculty member involved.

In general, students should make such requests of the instructor during the first two weeks of any given academic term, or as soon as possible after a particular examination date is announced by the instructor.

Students unable to reach a satisfactory arrangement with their instructor should contact the Office of Ombuds Services, 105 Strathmore Building, or the Office of Student Conduct, 1206 Murphy Hall, for assistance.

Instructors who have questions or who wish to verify the nature of the religious event or practice involved should contact the Office of Ombuds Services, 105 Strathmore Building, or the Office of Student Conduct for assistance.

**Undergraduate Final Examinations**

No student shall be excused from assigned final examinations, except as provided above in the policy on alternate examination dates and as provided in the following three paragraphs.

The instructor in charge of an undergraduate course is responsible for assigning the final grade in the course. The final grade shall reflect the student's achievement in the course and shall be based on adequate evaluation of that achievement. The instructor's method of evaluation must be announced at the beginning of the course. The methods may include a final written examination, a term paper, a final oral examination, a take-home examination, or other evaluation device. Evaluation methods must be of reasonable duration and difficulty and must be in accord with applicable departmental policies. Final written examinations may not exceed three hours' duration and are given only at the times and places established and published by the department chair and the Registrar's Office.

At the end of the term in which a student is expected to be graduated, a student's major department may examine him or her in the field of the major, may excuse the student from final examinations in courses offered by the department during that term and, with the approval of the Undergraduate Council, assign a credit value to such general examination.

An instructor shall, if he or she wishes, release to individual students their original final examinations (or copies). This may be done by any method that insures the students' right to privacy. Otherwise, the instructor shall retain final examination materials, or a copy thereof, until the end of the next succeeding regular term of instruction, during which period students shall have access to their examinations.

**Disclosure of Student Records**

Pursuant to the Federal Family Educational Rights and Privacy Act (FERPA), the California Information Practices Act, and the University of California Policies Applying to the Disclosure of Information from Student Records, students at UCLA have the right to (1) inspect and review records pertaining to themselves in their capacity as students, except as the right may be waived or qualified under federal and state laws and University policies, (2) have withheld from disclosure, absent their prior written consent for release, personally identifiable information from their student records, except as provided by federal and state laws and University policies, (3) inspect records maintained by UCLA of disclosures of personally identifiable information from their student records, (4) seek correction of their student records through a request to amend the records or, if such request is denied, through a hearing, and (5) file complaints with the U.S. Department of Education regarding alleged violations of the rights accorded them by FERPA.

UCLA, in accordance with federal and state laws and University policies, has designated the following categories of personally identifiable information as public information that UCLA may release and publish without the student's prior consent: name, address (local/mailing), permanent, and/or e-mail, telephone numbers, major field of study, dates of attendance, enrollment status, grade level, number of course units in which enrolled, degrees and honors received, the most recent previous educational institution attended, participation in officially recognized activities (including intercollegiate athletics), and the name, weight, and height of participants on intercollegiate athletic teams.

As a matter of practice, UCLA does not publish student addresses or telephone numbers in the campus electronic directory unless released by the student. The term public information in this policy is synonymous with the term directory information in FERPA.

Students who do not wish certain items (i.e., name, local/mailing, permanent, and/or e-mail address, telephone numbers, major field of study, dates of attendance, number of course units in which enrolled, and degrees and honors received) of this public information released and published may so indicate through MyUCLA. To restrict the release and publication of the additional items in the category of public information, complete the UCLA FERPA Restriction Request form available from the Registrar's Office, 1113 Murphy Hall.

Student records that are the subject of federal and state laws and University policies may be maintained in a variety of offices, including the Registrar's Office, Office of Student Conduct, UCLA Career Center, Graduate Division, UCLA External Affairs Department, and the offices of a student's College or school and major department. Students are referred to the online UCLA Campus Directory, which lists all the offices that may maintain student records, together with their campus address and telephone number. Students have the right to inspect their student records in any such office subject to the terms of federal and state laws and University policies. Inspection of student records maintained by the Registrar's Office is by appointment only and must be arranged three working days in advance. Call 310-825-1091, option 6, or inquire at the Registrar's Office, 1113 Murphy Hall.

A copy of the federal and state laws, University policies, and the print UCLA Telephone Directory may be inspected in the office of the Information Practices Coordinator, 500 UCLA Wilshire Center. Information concerning students' hearing rights may be obtained from that office and from the Office of Student Conduct, 1206 Murphy Hall.

**Campus Security Information**

**UCLA Police Department**

The UCLA Police Department (UCPD), 310-825-1491, is located at 601 Westwood Plaza. The sworn State of California Police Officers are empowered by the State of California with the authority to enforce all state and local laws. UCLA police officers patrol the campus 24 hours a day, 365 days a year. They enforce all applicable local, state, and federal laws, arrest violators, investigate and suppress crimes, and provide a full range of police services and community safety programs.

The department is linked by computer to city, state, and federal criminal justice agencies that provide access to information concerning criminal records, wanted persons, stolen property, and vehicle identification. The Detective Unit handles criminal investigations, and detectives conduct interviews, arrest violators,
execute search warrants, and file cases with the Los Angeles District and City Attorney offices.

Incident Reporting
UCLA police officers have primary jurisdiction over the UCLA campus, Rea gan UCLA Medi cal Center, Center for the Health Sciences, Santa Monica-UCLA Medical Center, and Uni versity Apartments South. The City of Los Angeles Police Department does not routinely handle calls for service on campus or on most UCLA properties. All requests for police service should be made to UCPD. All crime occurring on campus, the Center for the Health Sciences, and other UCLA properties should be reported immediately to the police department to ensure appropriate action is taken. Crimes occurring off campus should be reported immediately to the local law enforcement agency. UCPD does take reports from students, faculty, and staff for incidents occurring in the Westwood area.

Police, fire, or medical emergencies can be reported by calling 911 from any telephone on campus. All landline telephones (University, private, public) located on University grounds are tied into the 911 emergency system. Emergencies can also be reported by using the blue-hooded or yellow Emergency Reporting Telephones located throughout the campus.

Nonemergency calls for service can be made by contacting the department at 310-825-1491. Campus community members are encouraged to program the department number into their cell phones and report on suspicious circumstances.

Crime Statistics and Reports
As required by the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act and consistent with the amendments of the Violence against Women Reauthorization Act of 2014, UCLA prepares an annual report describing campus security policy and information concerning alcohol and drug use, crime prevention, crime reporting, and related matters. It also includes three years of crime statistics. Printed copies are available by calling 310-825-1491. The report can be accessed online.

Community Service Officers
UCPD employs approximately 80 student community service officers who are the additional eyes and ears (trained observers) of the department and act as nonintervention visual deterrents to crime. CSOs wear high-visibility uniforms and carry two-way police radios. They are dispatched by the department’s Communications Center and provide a direct link to police, fire, and medical aid. CSOs provide security service to a number of campus buildings, including residence halls and libraries. They are most well-known for the Campus Escort Service and the Evening Van Service. The Campus Escort Service operates every day of the year from dusk to 1 a.m. (2 a.m. on Thursdays during academic quarters). Individuals requesting the service call the Communications Center at 310-794-WALK; a CSO is then dispatched to walk them safely to their destination. The service is available to UCLA students, staff, faculty, and visitors and operates on campus and in the nearby residential areas. The Evening Van Service offers a safe and convenient mode of transportation around campus at night (Monday through Thursday, from 6 to 11 p.m. during academic terms) and is accessible to people with disabilities.

Crime Prevention
An involved community is one of the best defenses against crime. Therefore, the department is committed to a community policing philosophy and supports a proactive Crime Prevention Unit that works closely with community members to make UCLA a safer place to work, live, and learn. The unit gives presentations on vehicle and residential security, personal safety, office and equipment security, sexual assault prevention, and active shooter situations. Other programs are developed to meet the special needs of the campus community. Brochures and literature on crime prevention and personal safety are available. Counseling and Psychological Services (CAPS) and the Crime Prevention Unit offer presentations on sexual assault issues. Topics include acquaintance rape education and prevention, personal safety and prevention techniques, recovery from sexual assault, clear communications, and the continuum of violence and rape in society. The educational programs tailored to the needs of individual audiences include films, discussion groups, lectures, role-plays, and communication exercises. CAPS reaches students through the residence halls, sororities, fraternities, athletic teams, student clubs, and various student functions. Services include crisis intervention and advocacy for victims of sexual assault; short-term counseling and referrals for survivors, their families, and friends; support groups for rape survivors; and self-defense classes and a lending library. CAPS works closely with the student housing offices and the police department to increase campus safety.

Several programs have been designed to increase the level of crime awareness and campus safety at UCLA. Incidents of criminal activity that pose a potential threat to the campus are brought to the attention of the community through campus crime alert bulletins. Additionally, those interested in receiving public safety bulletins and news briefs can sign up for the public safety listserv.

Emergency Medical Services
UCPD provides emergency medical assistance for the campus community through the Emergency Medical Service program, which is staffed by students certified as emergency medical technicians (EMTs). As in all emergencies, call 911 for this service.

Alcohol and Substance Abuse Education
Students with alcohol or substance abuse problems create safety and health risks for themselves and others. Such abuses also can result in a wide range of emotional and behav-
Safety Tips
The nature of the studies and research done at UCLA requires many of the campus buildings to be open 24 hours. Because the campus is so large and adjacent to the greater Los Angeles community, individuals with criminal intent are able to access the University grounds. Regardless of the time of day or night and no matter where persons are on campus, they should be alert and aware of their surroundings and exercise good commonsense safety precautions. Anyone parking on campus should remember to lock their vehicles and consider investing in locked devices and/or alarms. Take advantage of all of the safety services provided by the University and UCPD. Use the Campus Escort Service when walking at night. Keep room and apartment doors locked at all times. Most important, anyone needing assistance to students, faculty, and staff; and/or referrals to neighboring police departments.

APPENDIX B: UNIVERSITY ADMINISTRATIVE OFFICERS

Terms of Regents appointed by the Governor expire March 1 of the year in parentheses. The Student Regent and Alumni Regents serve a one-year term beginning July 1 and ending June 30 of the year listed.

Regents Ex Officio

Governor of California
Edmund G. Brown, Jr.
Lieutenant Governor of California
Gavin C. Newsom
Speaker of the Assembly
Anthony Rendon
State Superintendent of Public Instruction
Thomas A. Torlakson
President of the Alumni Associations of the University of California
Francesco Mancia (2018)
Vice President of the Alumni Associations of the University of California
J. Alberto Lemus (2018)
President of the University
Janet Napolitano

Appointed Regents
Richard C. Blum (2026)
William De La Peña (2018)
Gareth Elliott (2025)
Russell S. Gould (2017)
Eddie Island (2017)
George D. Kieffer (2021)
Sherry L. Lansing (2022)
Monica C. Lozano (2022)
Hadi Makarechian (2020)
Eloy Ortiz Oakley (2024)
Norman J. Pattiz (2026)
John A. Pérez (2024)
Bonnie Reiss (2020)
Richard Sherman (2025)
Bruce D. Varner (2018)
Charlene Zettel (2021)
Paul Monge, Student Regent (2018)

Faculty Representatives to the Board of Regents
Robert C. May (2017-19)
Shane White (2016-18)

Staff Advisers to the Board of Regents
Sherry Main (2017-19)
Jason Valdny (2016-18)

Officers of the Regents
President of the Regents
Edmund G. Brown, Jr.
Chair of the Regents
Monica C. Lozano
Vice Chair of the Regents
Bonnie Reiss
Chief Investment Officer
Jagdeep Singh Bachher
General Counsel
Charles F. Robinson
Secretary and Chief of Staff
Anne Shaw
Senior Vice President—Chief Compliance and Audit Officer
John Lohse, Interim

Office of the President
President of the University
Janet Napolitano
Provost and Executive Vice President—Academic Affairs
Aimée Dorr
Executive Vice President—Chief Financial Officer
Nathan Brostrom
Executive Vice President—Chief Operating Officer
Rachael Nava
Executive Vice President—UC Health
John D. Stobo
Senior Vice President—Government Relations
Nelson Peacock
Senior Vice President—Public Affairs
Claire Holmes, Interim
Senior Vice President—Innovation and Entrepreneurship
Christine Gulbranson
Vice President—Agriculture and Natural Resources
Glenda Humiston
Vice President—Human Resources
Dwaine B. Duckett
Vice President—Information Technology Services and Chief Information Officer
Tom Andriola
Vice President—Institutional Research and Academic Planning
Pamela Brown
Vice President—Investments
Jagdeep Singh Bachher

Chair of the Regents
Monica C. Lozano
Vice Chair of the Regents
Eloy Ortiz Oakley
Vice President—Laboratory Management
Kimberly Budil
Vice President—General Counsel
Charles F. Robinson
Vice President—Research and Graduate Studies
Arthur B. Ellis
Vice President—Student Affairs
Robin Holmes-Sullivan

Chancellors of the Campuses
Chancellor at Berkeley
Carol T. Christ
Chancellor at Davis
Gary S. May
Chancellor at Irvine
Howard Gillman
Chancellor at Los Angeles
Gene D. Block
Chancellor at Merced
Dorothy Leland
Chancellor at Riverside
Kim A. Wilcox
Chancellor at San Diego
Pradeep K. Khosla
Chancellor at San Francisco
Sam Hawgood
Chancellor at Santa Barbara
Henry T.Y. Yang
Chancellor at Santa Cruz
George W. Blumenthal

University Professors, UCLA
Robert B. Edgerton, University Professor Emeritus, Los Angeles, Anthropology, Psychiatry and Biobehavioral Sciences
M. Frederick Hawthorne, University Professor Emeritus, Los Angeles, Chemistry and Biochemistry
Owen N. Witte, University Professor, Los Angeles, Microbiology, Immunology, and Molecular Genetics

UCLA Administrative Officers
Chancellor
Gene D. Block, PhD
Executive Vice Chancellor and Provost
Scott L. Waugh, PhD
Administrative Vice Chancellor
Michael J. Beck, MBA
Vice Chancellor—Academic Personnel
Michael S. Levine, PhD, Interim
Vice Chancellor and Chief Financial Officer
Steven A. Olsen, MPP
Vice Chancellor—Equity, Diversity, and Inclusion
Jerry Kang, JD
Vice Chancellor—External Affairs
Michelle Keohane, BA
Vice Chancellor—Health Sciences
John C. Mazziotta, MD, PhD
Vice Chancellor—Legal Affairs
Louise C. Nelson, JD
Vice Chancellor—Research
Ann R. Karagozian, PhD, Interim
Vice Chancellor—Student Affairs
Monroe Gordon, Jr., JD, Interim
teaching, research, and community service. Among the principal forms of private support are endowed professorships or “chairs,” which support the educational and research activities of distinguished members of the faculty.

As this catalog goes to press, UCLA has 440 endowed chairs that have been approved by the Office of the President of the University of California, as follows:

**School of the Arts and Architecture**
Alma M. Hawkins Memorial Chair
Harvey S. Perloff Chair
Shirley and Ralph Shapiro Directorship at the Fowler Museum
UCLA Art Council Professorship in Art

**School of Dentistry**
Alumni and Friends Presidential Endowed Chair
Dr. Thomas R. Bales Endowed Chair in Orthodontics
Dr. Thomas K. Barber Endowed Chair in Pediatric Dentistry
Nobel Biocare Endowed Chair in Surgical Implant Dentistry
Dr. No-Hee Park Chair in Dentistry
Tarrson Family Endowed Chair in Periodontics
United Cerebral Palsy of Los Angeles
Endowed Chair in Special Patient Care
Jack A. Weichman Chair in Endodontics
Bob and Marion Wilson Endowed Chair
Felix and Mildred Yip Endowed Professorship in Dentistry

**Graduate School of Education and Information Studies**
Martin and Bernard Breslauer Professorship in Bibliography
Allan Murray Cartter Chair in Higher Education
Carol L. Collins UES Director's Chair Fund
George F. Kneller Chair in Education and Anthropology
George F. Kneller Chair in Education and Philosophy
Presidential Chair in Education and Diversity
Presidential Chair in Information Studies
UNESCO Chair on Global Learning and Global Citizenship Education
Wasserman Endowed Deanship of Education and Information Studies

**Henry Samueli School of Engineering and Applied Science**
L.M.K. Boelter Chair in Engineering
Vijay K. Dhir Chair in Engineering
Englekirp Presidential Endowed Chair in Structural Engineering
Tauglott and Dorothya Frederking Endowed Chair in Cryogenics
Friedmann Chair in Knowledge Sciences
Leonard Kleinrock Chair in Computer Science
Evalyn Knight Chair in Engineering
Levi James Knight, Jr., Chair in Engineering
Richard G. Newman AECOM Endowed Chair in Civil Engineering
Nippon Sheet Glass Company Chair in Materials Science
Northrop Grumman Chair in Electrical Engineering
Northrop Grumman Chair in Electrical Engineering/Electromagnetics
Northrop Grumman Opto-Electronic Chair in Electrical Engineering
Ralph M. Parsons Foundation Chair in Chemical Engineering
Jonathan B. Postel Chair in Computer Systems
Jonathan B. Postel Chair in Networking
Raytheon Company Chair in Electrical Engineering
Raytheon Company Chair in Manufacturing Engineering
Charles P. Reames Endowed Chair in Electrical Engineering
Ben Rich Lockheed Martin Chair in Aeronautics
Rockwell Collins Chair in Engineering
William Frederick Seyer Chair in Materials Electrochemistry
Ronald and Valerie Sugar Endowed Chair in Engineering
Syamantec Term Chair in Computer Science
Carol and Lawrence E. Tannas, Jr., Endowed Chair in Engineering
William D. Van Vorst Chair in Chemical Engineering Education
Volgenau Endowed Chair in Engineering
Wintek Endowed Chair in Electrical Engineering

**School of Law**
Norman Abrams Endowed Chair in Law
Omar and Azmeralda Alfi Chair in Islamic Law
Harry Graham Balter Chair in Law
Barrall Family Endowed Chair in Tax Law and Policy
David A. Binder Endowed Chair in Clinical Law
Connell Professorship of Law
Dan and Rae Emmett Endowed Chair in Environmental Law
Rosalinde and Arthur Gilbert Foundation Endowed Chair in Civil Rights and Civil Liberties
Paul Hastings Endowed Chair in Business Law
Robert Henigson Endowed Chair in Legal Ethics
Pete Kameron Endowed Chair in Law
Pete Kameron Chair in Law and Social Justice
Richard C. Maxwell Chair in Law
McDonald/Wright Chair in Law
Arjay and Frances Fearing Miller Chair in Law
Susan Westerberg Prager Endowed Chair in Law
Honorable Harry Pregerson Endowed Chair in Law
David G. and Dallas P. Price Chair in Law
Michael H. Schill Endowed Chair in Law
Gary T. Schwartz Endowed Chair in Law
Security Pacific Bank Chair
Shirley Shapiro Endowed Chair in Environmental Law

**Appendix C: Endowed Chairs**

Although UCLA is a public institution, private gifts are increasingly important in maintaining the quality of the University’s three missions of...
Jonathan D. Varat Endowed Chair in Law
William D. Warren Chair in Law
Frank G. Wells Endowed Chair in Environmental Law
Stephen Yeazell Endowed Chair in Law

College of Letters and Science
Armen A. Alchian Chair in Economic Theory
Maurice Amado Chair in Sephardic Studies
Jahangir and Eleanor Amuzegar Chair in Iranian Studies
Joyce Oldham Appleby Endowed Chair of America in the World
Thomas M. Asher Endowed Chair in Microbiology
Marilyn Beaudry-Corbett Endowed Chair in Medieval History
Thomas E. Lifka Chair in History

Robert N. Burr Endowed History Department Chair
Edward W. Carter Chair in European Art
Chair in Sustainability I
Chair in Sustainability II
Morgan and Helen Chu Endowed Chair in Asian American Studies
James and Carol Collins Chair in College of Letters and Science
Lloyd E. Cotsen Chair in Archaeology
Norman Cousins Endowed Chair in Psychoneuroimmunology
D.J. and J.M. Cram Chair in Organic Chemistry
Lore and Gerald Cunard Chair in UCLA/Getty Conservation Program
Charles E. Davidsson Endowed Chair in Economics
De Logi Chair in Biological Sciences
Donald R. Dickey Chair in Vertebrate Biology
Edward A. Dickson Emeriti Professorship
A. Richard Diebold, Jr., Endowed Chair in Indo-European Studies
Distinguished Chair in Environment and Sustainability
Navin and Pratima Doshi Chair in Indian Studies
Mr. and Mrs. C.N. Flint Professorship in Philosophy
Christopher S. Foote Term Chair in Literature
Gloria and Paul Griffin Chair in Philosophy
Haruhisa Handa Professorship in Shinto Studies
John Charles Hillis Chair in American Politics and Public Policy
Dr. Myung Ki Hong Endowed Chair in Materials Innovation
Dr. Myung Ki Hong Endowed Chair in Polymer Science
Richard Hovanessian Chair in Modern Armenian History
Marcia H. Howard Term Chair in Literary Studies
Michael and Alice Jung Endowed Chair in Medicinal Chemistry and Drug Discovery
Sady and Ludwig Kahn Chair in Jewish History
Sady and Ludwig Kahn Endowed Directorship for Jewish Studies
Penny Kanner Endowed Chair in Women's Studies
Renée and David Kaplan Presidential Endowed Chair in Philosophy
Fred Kavli Chair in Nanosystems Sciences
Kershaw Chair in Ancient Eastern Mediterranean Studies
Ibn Khaldun Endowed Chair in World History
Leon and Joanne V.C. Knopf Assistant Professorship in Physics and Geophysics
Alexander and Renée Kolon Endowed Professorship in Molecular Biology and Biophysics
Korea Times-Hankook Ilbo Endowed Chair in Korean American Studies and Law
Lauren B. Leichtman and Arthur E. Levine Astrophysics Endowed Chair
Madeleine L. Letessier Chair in French and Francophone Studies
Thomas E. Lifka Chair in History
Vladimir and Lydia Markov Chair in Russian Literature
John McGuire Career Development Chair
Dorothy L. Meier Social Equities Chair
Ronald J. Mellor Chair in Ancient History
Sherie L. Morrison Chair in Microbiology, Immunology, and Molecular Genetics
John Muir Memorial Endowed Chair in Geography
Franklin D. Murphy Chair in Italian Renaissance Studies
Narekatsi Chair in Armenian Studies
Gary B. Nash Endowed Chair in United States History
Wai W. Neikirk Term Chair
LeRoy Neiman Term Chair
Nickoll Family Endowed Chair in History
1939 Society Samuel Goetz Chair in Holocaust Studies
Joan Palevsky Chair in Classics
Presidential Chair in Chemistry
Presidential Chair in Developmental Immunology
Presidential Chair in Institute of the Environment
Presidential Chair in Modern European History
Presidential Chair in Molecular Cell Biology
Hans Reichenbach Chair in Scientific Philosophy
Peter Reil Chair in European History (1450 to Modern)
Howard Reiss Career Development Chair
Maria Rowena Ross Term Chair in Cell Biology and Biochemistry
Michael and Irene Ross Chair in Yiddish Studies
Musa Sabi Chair in Iranian Studies
David Saxon Presidential Term Chair in Mathematics
David Saxon Presidential Term Chair in Physics
David S. Saxon Presidential Chair in Physics

David O. Sears Presidential Endowed Chair in Division of Social Sciences
Johanna F. and Joseph H. Shaper Family Chair in Microbiology
Joan Silsbee Chair in African Cultural Archaeology
Louis B. and Martha B. Slichter Endowed Chair in Geophysics and Planetary Physics
Louis B. and Martha B. Slichter Endowed Chair in Geosciences
Kenneth L. Sokoloff Chair in Economic History
Charles Speroni Chair in Italian Literature and Culture
Staglin Family Chair in Psychology
Steinmetz Chair in Classical Archaeology and Material Culture
Irving and Jean Stone Endowed Chair in Life Science
Irving and Jean Stone Endowed Chair in Physical Science
Irving and Jean Stone Endowed Chair in Humanities
Jean Stone Chair
Keith and Cecilia Terasaki Presidential Endowed Chair in Division of Life Sciences
UCLA Alumni and Friends of Japanese Ancestry Chair in Japanese American Studies
UCLA Foundation Chair
Steven F. and Christine L. Udvar-Hazy Chair
Viterbi Family Foundation Visiting Professorship in Mediterranean Jewish Studies
Alexander von Humboldt Endowed Chair in Geography
Scott Waugh Endowed Chair in Division of Social Sciences
Eugen Weber Chair in Modern European History
Robert and Dorothy Wellman Chair in Medieval History
Wendell Jeffrey and Bernice Wenzel Term Chair in Behavioral Neuroscience
Dean M. Willard Chair in Chemistry
Paul Winston Chair in Organic Chemistry
Linda and Fred Wudl Term Chair
Stanley M. Zimmerman Endowed Chair in Economics and Finance
Jeffrey and Helo Zink Endowed Professional Development Term Chair in Chemistry

John E. Anderson Graduate School of Management
Allstate Chair in Insurance and Finance
Andersen Worldwide Chair in Management
John E. Anderson Chair in Management
Marion Anderson Chair in Management
Arden Realty Chair
Donnalis ’86 and Bill Barnum Endowed Term Chair in Management
Robert D. Beyer ’83 Chair in Management
California Chair in Real Estate and Land Economics
Edward W. Carter Chair in Business Administration
William M. Cockrum III Presidential Term Chair in Entrepreneurship
William M. Cockrum Professorship in Entrepreneurial Finance
James A. Collins Chair in Management
Appendix C: Endowed Chairs / 701

David Geffen School of Medicine

William S. Adams, MD, Chair in Medicine
Ahmanson Chair in Ophthalmology
Mary D. Allen Chair in Vision Research
Lori Altshuler Endowed Chair in Mood Disorders
Wallis Annenberg Endowed Chair in Integrative East-West Medicine
Leonard Apt Endowed Chair in Pediatric Ophthalmology
Archstone Foundation Endowed Chair in Geriatrics
Stephen J. Ryan Arnold and Mabel Beckman Foundation Chair
Casey Lee Ball Endowed Chair in Pediatric Nephrology
Wiley F. Barker Chair in Vascular Surgery
Dena Bat-Yaacov Endowed Chair in Childhood Psychiatry and Biobehavioral Sciences
Ulrich Batzdorf, MD, Chair in Spinal Neurosurgery
Louis D. Beaumont Chair in Surgery
Jerome L. Belzer Chair in Medical Research

Lillian and Alvin L. Bergman Chair in Vascular Research
Bing Professorship in Urologic Research
Anna and Harry Borun Chair in Geriatrics/Gerontology
Bowyer Professorship in Medical Oncology
Saul Brandman Endowed Chair in Pulmonary Arterial Hypertension
Judson Braun Chair in Biological Psychiatry
Geri and Richard Brawerman Chair in Pediatric Neurosurgery
Gary L. Brinderson Family Chair in Neuro-Intensive Care
Eli and Edythe L. Broad Foundation Chair in Inflammatory Bowel Disease Research
Rubin Brown Chair in Pediatric Neurology
Burnett Family Chair
Joseph Campbell Chair in Child Psychiatry
Iris Cantor Chair in Breast Imaging
Edward W. Carter Chair in Internal Medicine
Castera Chair in Cardiology
Vincent and Stella Coates Chair in Molecular Neurobiology
Tony Coelho Chair in Neurology
Carol and James Collins Chair
James and Carol Collins Chair in Geriatric Medicine
William E. Connor Chair in Cardiothoracic Transplantation
Eliot Corday Chair in Cardiovascular Medicine and Science
Norman Cousins Endowed Chair in Psychoneuroimmunology
Crump Chair in Medical Engineering
Karen and Frank Dabby Endowed Chair in Ophthalmology
Dr. Alfonsina Q. Davies Endowed Chair in Honor of Paul Crandall, MD, for Epilepsy Research
M. Philip Davis Chair in Microbiology and Immunology
Robert and Kelly Day Chair in Cardiothoracic Surgery
Robert and Kelly Day Chair in General Surgery
Robert and Kelly Day Chair in Surgical Outcomes
Robert and Kelly Day Chair in Transplantation
Jean B. deKernion, MD, Endowed Chair in Urology
Wini and William J. Dignam Chair in Obstetrics and Gynecology
John Bartley Dillon, MD, Endowed Chair in Anesthesiology
Roy and Carol Doumani Chair in Molecular Pharmacology
Doumani Chair in Urological Oncology
Dumont-UCLA Chair in Transplantation Surgery
Max Factor Family Foundation Chair in Nephrology
Charles Kenneth Feldman Chair in Ophthalmology
Elise and Isaac Fogelman Endowed Chair in Pediatric Neurology
Dr. Daniel X. Freedman Administrative Chair in Academic Psychiatry
Joaquin M. Fuster Chair in Cognitive Neuroscience
David Geffen Chair in Informatics
David Geffen Chair in Medical Research
Laraine and David Gerber Chair in Ophthalmology
Maggie G. Gilbert Endowed Chair in Bipolar Disorders
Rosalinde and Arthur Gilbert Foundation Endowed Chair in Interdepartmental Clinical Pharmacology
Joan S. and Ralph N. Goldwyn Chair in Immunobiology and Transplantation Research
Victor Goodhill, MD, Chair in Head and Neck Surgery
Steven C. Gordon Family Chair in Parkinson’s Disease Research
Dolly Green Chair in Ophthalmology
Thomas N. Grove Chair in Anesthesiology
Maud Cady Guthman Chair in Cardiology
Muriel Harris Chair in Geriatric Psychiatry
Shirley M. Hatos Chair
Stefan Hatos Endowed Chair in Psychiatry and Biobehavioral Sciences
Gavin S. Herbert Endowed Chair for Macular Degeneration
Ernest G. Herman Chair in Ophthalmology
Holt and Jo Hickman Endowed Chair in Advanced Lung Disease and Lung Transplantation
Ronald S. Hirshberg Chair in Translational Pancreatic Cancer Research
A. Ray Irving, Jr., MD, Chair in Clinical Ophthalmology
Margaret Holden Jones Kanaar, MD, Chair in Cerebral Palsy
Kaiser Permanente Endowed Chair in Community Medicine
Maddie Katz Endowed Chair in Palliative Care Research and Education
Ronald L. Katz, MD, Endowed Chair in Anesthesiology
Chizuko and Nobuyuki Kawata Chair in Cardiology
Dorothy and Robert Keyser Endowed Chair
Karl Kirchgessner Foundation Chair in Vision Science
Arnold W. Klein, MD, Chair in Dermatology
George F. Kneller Chair in Family Medicine
Kolokotrones Chair in Ophthalmology
John J. Kuiper Chair in Nephrology and Renal Transplantation
Grace and Walter Lantz Endowed Chair in Ophthalmology
Lya and Harrison Latta Endowed Chair in Pathology
Eleanor I. Leslie Chair in Innovative Brain Research
Eleanor I. Leslie Chair in Neuroscience
Eleanor I. Leslie Chair in Pioneering Brain Research
Barbara A. Levey, MD, and Gerald S. Levey, MD, Endowed Chair
Gerald S. Levey, MD, Endowed Chair
Wilton Li Chair in Cornea and Uveitis
Lincy Foundation Chair in Clinical Gastroenterology
Lincy Foundation Distinguished Service Chair
William P. Longmire, Jr., Chair in Surgery
Meyer and Renee Luskin Chair in Migraine and Headache Studies
Gordon and Virginia MacDonald Distinguished Chair in Human Genetics
Charles H. Markham Chair in Neurology  
Della Martin Chair in Psychiatry  
Mattel Executive Endowed Chair in Pediatrics  
David May II Chair in Ophthalmology  
John Mazzotti, MD, PhD, Term Chair in Medicine  
Henry Alvin and Carrie L. Meinhardt Chair in Kidney Cancer Research  
Sherman M. Mellinkoff Distinguished Professor in Medicine Chair  
Joanne and George Miller and Family Endowed Chair  
Timothy A. Miller Chair in Plastic Surgery  
Jeffrey Modell/Sidney Sheldon Chair in Immunology  
Moss Foundation Chair in Gastrointestinal and Personalized Surgery  
Dr. Walter and Mrs. Kathryn Mullikin Chair in Orthopaedic Surgery  
Jane and Marc Nathanson Endowed Chair  
James H. Nicholson Chair in Pediatric Cardiology  
Mary Oakley Foundation Chair in Neurodegenerative Diseases  
Frances M. O’Malley Administrative Chair in Neuroscience History  
Oppenheimer Brothers Chair  
Helga and Walter Oppenheimer Endowed Chair in Orthopaedic Oncology  
Albert F. Parlow and David H. Solomon Chair for UCLA Program on Aging  
Gail Patrick Endowed Administrative Chair in Brain Research  
Samuel J. Pearlman, MD, and Della Z. Pearlman Chair in Head and Neck Surgery  
Carl M. Pearson, MD, Endowed Chair in Rheumatology  
Pennington Family Foundation Endowed Chair in Pediatrics  
Frances and Albert Piansky Chair in Anatomy  
Guitaari Pierpoint Endowed Chair in Interstitial Lung Disease  
Thomas P. and Katherine K. Pike Chair in Addictive Studies  
Elizabeth R. and Thomas E. Plott Chair in Gerontology  
Edith Agnes Plumb Endowed Chair in Neurobiology  
Harold and Pauline Price Chair in Ophthalmology  
Pritzker Family Endowed Chair in Pathology  
Shlomo Raz, MD, Chair in Urology  
Lynda and Stewart Resnick Endowed Chair in Human Nutrition  
Resnick Chair in Eating Disorders  
Revoln Chair in Women’s Health  
Leo G. Rigler Chair in Radiological Sciences  
Augustus S. Rose Chair in Neurology  
Arthur L. Rosenbaum, MD, Chair in Pediatric Ophthalmology  
Maxine and Eugene Rosenfeld Endowed Chair in Computational Genetics  
Maxine and Eugene Rosenfeld Endowed Chair in Medical Education  
Carol and Saul Rosenzweig Endowed Chair in Cancer Therapies Development  
Estelle, Abe, and Marjorie Sanders Chair in Cancer Research  
Daljit S. and Elaine Sarkaria Endowed Chair in Diagnostic Medicine  
Bernard G. Sarnat, MD, Endowed Chair in Craniofacial Biology  
Ethel Scheibel Chair in Neuroscience  
Peter William Shapiro Chair for Center for Cerebral Palsy  
Shapiro Family Chair in Child Development Studies and Cerebral Palsy  
Fred Silton Family Chair in Movement Disorders  
Jennifer Jones Simon Chair in Radiation Oncology  
Norton Simon Chair in Biophysics  
Jonathan Sinay Chair in Epilepsy  
Henry E. Singleton Chair in Urology  
Jack H. Skirball Chair in Multiple Sclerosis Research  
Jack H. Skirball Chair in Ocular Inflammatory Eye Disease  
Jack H. Skirball Chair in Pediatrics  
P. Gene and Elaine Smith Endowed Chair in Alzheimer’s Disease Research  
Rebecca Smith Chair in Molecular and Cellular Pathology  
Jerome and Joan Snyder Chair in Ophthalmology  
Joan and Jerome Snyder Chair in Cornea Diseases  
George F. Solomon Professorship in Psychobiology  
Spielberg Family Chair in Urologic Oncology  
Norman F. Sprague Chair in Molecular Oncology  
Fran and Ray Stark Foundation Chair in Digestive Diseases  
Fran and Ray Stark Foundation Chair in Ophthalmology  
Fran and Ray Stark Foundation Chair in Urology  
Frances Stark Chair in Neurology  
Peter Starrett Term Chair in Medical Education  
Rupert and Gertrude Steiger Vision Research Chair  
Jules Stein Chair in Ophthalmology  
Michael and Sue Steinberg Endowed Chair in Global AIDS Prevention and Policy Research  
W. Eugene Stern Chair in Neurosurgery  
Ruth and Raymond H. Stotter Chair in Neurosurgery  
Bradley R. Straatsma, MD, Endowed Chair in Ophthalmology  
Dorothy and Leonard Strauss Chair in Gastroenterology  
In Memory of Gussie Borun  
Streisand Chair in Cardiology  
Dr. George Tarjan Chair in Intellectual and Developmental Disabilities Research  
Michael E. Tennenbaum Family Endowed Chair in Creativity Research  
Paul I. Terasaki Chair in Surgery  
Flora L. Thornton Chair in Vision Research  
Leon J. Tiber, MD, and David S. Alpert, MD, Chair in Medicine  
Vernon O. Underwood Family Chair in Ophthalmology  
Philo Woodrow Van Wagoner Professorship  
Variety Club–D. Barry Reardon Endowed Chair in Pediatric Hematology/Oncology  
Richard D. and Ruth R. Walter Chair in Neurology  
Wasserman Professor of Ophthalmology  
David Well Chair in Psychiatry and Biobehavioral Sciences  
Dr. Louis Jolyon West Chair in Psychiatry  
Wilder Chair in Psychiatry and Neuroscience  
Susan and David Wilstein Endowed Chair in Medicine  
Susan and David Wilstein Endowed Chair in Rehabilitation Medicine  
Judith and Robert Winston Chair in Pediatric Urology  

**Herb Alpert School of Music**  
Susan G. Covel and Mitchel D. Covel, MD, Chair in Music  
Mickey Katz Endowed Chair in Jewish Music  
Leo M. and Elaine Krown Klein Chair in Performance Studies  
S. Charles Lee Chair in Architecture and Urban Design  
Presidential Chair in Music and Interactive Arts  
Mohindar Brar Sambhi Endowed Chair in Indian Music  

**School of Nursing**  
Lulu Wolf Hassenplug Chair in Nursing  
Audrienne H. Moseley Chair in Biological Nursing Science  
Audrienne H. Moseley Chair in Community Health Research  
Audrienne H. Moseley Chair in Nursing  
Audrienne H. Moseley Chair in Women’s Health Research  

**Meyer and Renee Luskin School of Public Affairs**  
Marjorie Crump Chair in Social Welfare  
Meyer and Renee Luskin Chair in Inequality and Democracy  
Luskin Endowed Chair for Dean of the School of Public Affairs  

**Jonathan and Karin Fielding School of Public Health**  
Fred H. Bixby Chair in Population Policy  
Jonathan and Karin Fielding Presidential Chair in Health and Equity  
Fred W. and Pamela K. Wasserman Endowed Chair in Health Policy Management  

**School of Theater, Film, and Television**  
David C. Copley Chair for Study of Costume Design  
Lew and Pamela Hunter/Karina and Janice Zakin Chair in Screenwriting  
Rouben Mamoulian Visiting Chair in Film Directing  
Rouben Mamoulian Visiting Chair in Theater Directing  

**UCLA Chancellor’s Office**  
James S. Coleman Chair in International Development Studies  
Betsy Wood Knapp Chair in Innovation and Creativity
Appendix D: Distinguished Teaching Awards

Academic Senate Recipients

Each year the UCLA Alumni Association presents Distinguished Teaching Awards to six Academic Senate faculty members. The highly prized awards are presented at the annual Andrea L. Rich Night to Honor Teaching, and selection of recipients is based on recommendations of the Academic Senate Committee on Teaching. Nominations are solicited from academic departments during fall quarter.

The Luckman Distinguished Teaching Awards Program was established in late 1991 after receipt of a generous gift from Harriet and Charles Luckman. Awards given for 1992 through 1997 were named the Luckman Distinguished Teaching Awards in honor of Charles Luckman. Awards given for 1998 through 2001 were named the Luckman Prize Teaching Awards in honor of Harriet Luckman.

The selection of recipients is based on recommendations by the Academic Senate Committee on Teaching. Nominations are solicited from academic departments during fall quarter. The selection of the recipient is based on the committee's recommendation to the Academic Senate.

Academic Senate Recipients (1961-1965)

1961
John F. Barron (Economics)
Hector E. Hall (Physiology)
Kenneth N. Trueblood (Chemistry and Biochemistry)

1962
Charles W. Hoffman (Germanic Languages)
Thomas P. Jenkin (Political Science)
Ken Nobe (Chemical Engineering)

1963
Carl W. Haggé (Germanic Languages)
Wendell P. Jones (Education)
Robert H. Sorgenfrey (Mathematics)
Saul Weinstein (Chemistry and Biochemistry)

1964
Mostafa A. El-Sayed (Chemistry and Biochemistry)
Leon Howard (English)
Moshe F. Rubinstein (Civil and Environmental Engineering)

1965
E.A. Carlson (Biology)
W.R. Hitchcock (History)
Allen Parducci (Psychology)
William R. Romig (Microbiology and Molecular Genetics)

1966
George A. Bartholomew (Biology)
William R. Gerberding (Political Science)
Hans Meyerhoff (Philosophy)
Joseph E. Spencer (Geography)

1967
Basil Gordon (Mathematics)
J.A.C. Grant (Political Science)
William Matthews (English)
David S. Saxon (Physics and Astronomy)
E.K.L. Upton (Physics and Astronomy)

1968
Edward W. Graham (Chemistry and Biochemistry)
W. James Popham (Education)
Sydney C. Rittenberg (Microbiology and Molecular Genetics)
Robert P. Stockwell (Linguistics)
Fred N. White (Physiology)

1969
Robert J. Finkelstein (Physics and Astronomy)
Douglas S. Hobs (Political Science)
J.E. Phillips (English)
Raymond M. Redheffer (Mathematics)
Margret I. Sellers (Microbiology and Immunology)

1970
Ehrhard Bahr (Germanic Languages)
Joseph Casarcano (Biology)
B. Lamar Johnson (Education)
Daniel Kivelson (Chemistry and Biochemistry)
Richard D. Lehan (English)

1971
Vernon E. Denny (Chemical Engineering)
Peter N. Ladehog (Linguistics)
Arthur D. Schwabe (Medicine)
Duane E. Smith (Political Science)
Andreas Tietze (Near Eastern Languages and Cultures)

1972
Barbara K. Keogh (Education)
James N. Miller (Microbiology and Immunology)
David S. Rodes (English)
Ned A. Shearer (Speech)
Charles A. West (Chemistry and Biochemistry)

1973
Kirby A. Baker (Mathematics)
David Evans (Chemistry and Biochemistry)
Albert Hoxie (History)
Nhan Levan (Electrical Engineering)
Judith L. Smith (Physiological Science)

1974
Robert B. Edgerton (Anthropology, Psychiatry and Biobehavioral Sciences)
David S. Eisenberg (Chemistry and Biochemistry)
Victoria A. Fromkin (Linguistics)

Robert C. Neerhout (Pediatrics)
Andrea L. Rich (Speech)

1975
Alma M. Hawkins (World Arts and Cultures)
Morris Holland (Psychology)
Paul M. Schachter (Linguistics)
Stanley A. Wolpert (History)
Richard W. Young (Neurobiology)

1976
Marianne Celce-Murcia (Teaching English as a Second Language and Applied Linguistics)

1977
Michael J.B. Allen (English)
Henry M. Cherr (Dentistry)
Richard C. Maxwell (Law)
J. William Schoff (Earth and Space Sciences)
Verne N. Schuman (Chemistry and Biochemistry)

1978
William R. Allen (Economics)
Michael E. Jung (Chemistry and Biochemistry)
J. Fred Weston (Management)
Thomas D. Wickens (Psychology)
Johannes Wilbert (Anthropology)

1979
Steven Krantz (Mathematics)
Paul I. Rosenthal (Communication Studies)
Christopher Salter (Geography)
James H. White (Mathematics)
Stephen C. Yeazell (Law)

1980
A.R. Braumuller (English)
Fredi Chiappelli (Italian)
Kenneth L. Karst (Law)
Richard F. Logan (Geography)
Ronald F. Zernicke (Physiological Science)

1981
Arnold J. Band (Near Eastern Languages and Cultures)
Charles L. Batten, Jr. (English)
Lucien B. Guze (Medicine)
Gerald Lopez (Law)
Andy Wong (Dentistry)

1982
Dean Bok (Neurobiology)
Robin S. Liggett (Architecture and Urban Design, Urban Planning)
William Melnitz (Theater)
Joseph K. Perloff (Medicine)
Karen E. Rowe (French)

1983
Claude Bernard (Physiology and Anatomy)
Bryan C. Ellicson (Economics)
Robert S. Elliott (Microbiology and Immunology)
Albert D. Hutter (English)
Charles M. Knobler (Chemistry and Biochemistry)

1984
Robert Dallek (History)
1994
David A. Binder (Law)
Jon P. Davidson (Earth and Space Sciences)
Melvin Oliver (Sociology)
Barbara L. Packer (English)
E. Victor Wolfenstein (Political Science)

1995
Noriko Akatsuka (East Asian Languages and Cultures)
Douglas Hollan (Anthropology)
V.A. Kolve (English)
Jerome Rabow (Sociology)
Paul V. Reale (Music)

1996
Walter Allen (Sociology)
Judith A. Carney (Geography)
William M. Gelbart (Chemistry and Biochemistry)
Phyllis A. Guzé (Medicine)
Peter B. Hammond (Anthropology)

1997
Uptal Banerjee (Molecular, Cell, and Developmental Biology)
Christine D. Gutierrez (Education)
Susan McClary (Musicology)
Arnold B. Scheibel (Neurobiology, Psychiatry, and Biobehavioral Sciences)
Ivan Szelényi (Sociology)

1998
George W. Bernard (Dentistry)
Verónica Cortéz (Spanish and Portuguese)
Wayne A. Dollase (Earth and Space Sciences)
Jayne E. Lewis (English)
Joshua S.S. Muldavin (Geography)

1999
Grace Ganz Blumberg (Law)
Alessandro Duranti (Anthropology)
Richard H. Gold (Radiological Sciences)
N. Katherine Hayles (English)
Bernard Weiner (Psychology)

2000
Scott H. Chandler (Physiological Science)
Efrain Kristal (Spanish and Portuguese)
Hector F. Myers (Psychology)
David Sklansky (Law)
Robert N. Watson (English)

2001
Michael J. Colaricci (English)
Glen M. MacDonald (Geography)
Kevin Terracciano (History)
James W. Trent (Education)
Brian Walker (Political Science)

2002
Christopher R. Anderson (Mathematics)
Steven G. Clarke (Chemistry and Biochemistry)
Anne K. Mellor (English)
Lee Todd Miller (Pediatrics)
Grant S. Nelson (Law)

2003
Joseph J. DiStefano III (Computer Science, Medicine)
Robin L. Garrell (Chemistry and Biochemistry)

A.P. Gonzalez (Film, Television, and Digital Media)
Mitchell B. Morris (Musicology)
Kirk J. Stark (Law)

2004
David B. Kaplan (Philosophy)
Kathryn A. Morgan (Classics)
Mark R. Morris (Physics and Astronomy)
Jesús Torrecillas (Spanish and Portuguese)
Joan Waugh (History)

2005
Roger Bourland (Music)
Robert G. Fovell (Atmospheric and Oceanic Sciences)
Elma González (Ecology and Evolutionary Biology)
Elizabeth A. Marchant (Spanish and Portuguese)
Mike Rose (Education)
Keith D. Stolzenbach (Civil and Environmental Engineering)

2006
Robert A. Guval (Classics)
Patricia M. McDonough (Education)
Albert J. Moore (Law)
Kenneth A. Nagy (Ecology and Evolutionary Biology)
David L. Rigby (Geography)
Geoffrey W. Symcox (History)

2007
John A. Agnew (Geography)
Devon Carbado (Law)
Valerie J. Matsunuma (Asian American Studies, History)
Behzad Razavi (Electrical Engineering)
Daniel G. Solórzano (Education)
Blaire Van Valkenburgh (Ecology and Evolutionary Biology)

2008
Elizabeth L. Bjork (Psychology)
Peggy M. Fong (Ecology and Evolutionary Biology)
Linda C. Garro (Anthropology)
Teofilo F. Ruiz (History)
Benjamin J. Schwartz (Chemistry and Biochemistry)
Robert S. Winter (Music)

2009
Roger Detels (Epidemiology)
Luisa M. Iruela-Arispe (Molecular, Cell, and Developmental Biology)
Yung-Ya Lin (Chemistry and Biochemistry)
Mark B. Moldwin (Earth and Space Sciences)
Susan J. Plann (Applied Linguistics, Spanish and Portuguese)
Janice L. Reiff (History)

2010
Katsushi Arisaka (Physics and Astronomy)
Daniel T. Blumstein (Ecology and Evolutionary Biology)
John T. Caldwell (Film, Television, and Digital Media)
Albert J. Courey (Chemistry and Biochemistry)
Jerry Kang (Law)
Steven P. Reise (Psychology)
Appendix D: Distinguished Teaching Awards / 705

Non-Academic Senate Recipients

In spring of 1985, the Office of Instructional Development began sponsorship of awards to three instructors who are not members of the Academic Senate. This category includes lecturers and adjunct and clinical faculty members. All non-Academic Senate faculty members who are nominated by their departments are eligible. Recipients are selected by the Academic Senate Committee on Teaching, utilizing the same criteria as those used for Academic Senate members.

The Luckman Distinguished Teaching Awards Program was established in late 1991 after receipt of a generous gift from Harriet and Charles Luckman. Awards given for 1992 through 1997 were named the Luckman Distinguished Teaching Awards.

1985
L. Geoffrey Cowan (Communication Studies)
Mary Elizabeth Perry (History)
Linda Diane Venis (English)

1986
David Cohen (Mathematics)
Johanna Harris-Heggie (Music)
Paul Von Blum (Interdisciplinary)

1987
Carol D. Berkowitz (Pediatrics)
Jeffrey I. Cole (Communication Studies)
Cheryl Giuliano (Writing Programs)

1988
Jeanne Gunner (Writing Programs)
Art Huffman (Physics and Astronomy)
David G. Kay (Computer Science)

1989
S. Scott Barchby (History)
Bonnie Lisie (Writing Programs)
Kenneth R. Pfeffer (Civil Engineering, Psychology)

1990
Lisa Gerrard (Writing Programs)
Andres Durstenfeld (Biology)
Dorothy Phillips (Physiological Science)

1991
Marie S. Gregory (Speech)
Betty A. Luceigh (Chemistry and Biochemistry)
Cheryl Pfoff (Writing Programs)

1992
Janet Goodwin (Applied Linguistics, Teaching English as a Second Language)
Janette Lewis (Writing Programs)
Yihua Wang (East Asian Languages and Cultures)

1993
Stephen Dickey (English)
Sondra Hale (Anthropology)
Jutta Landa (Germanic Languages)

1994
Steven K. Derian (Law)
Linda Jensen (Applied Linguistics, Teaching English as a Second Language)

1995
Nicholas Collaros (French)
Kristine S. Knaplund (Law)
Christopher Mott (English)

1996
Scott Bowman (Political Science)
Timothy Tangerlini (Scandinavian Section)
G. Jennifer Wilson (Honors, Undergraduate Programs)

1997
William McDonald (Film and Television)
Stuart Slavin (Pediatrics)
Sung-Ock Sohn (East Asian Languages and Cultures)

1998
Paul Frymer (Political Science)
George Gadda (Writing Programs)
Julie Giese (English)

1999
Patricia Gilmore-Jaffe (Writing Programs)
Emily Schiller (English)
Scott Votey (Emergency Medicine)

2000
Nicole Dufrasne (French)
Thomas Holm (Law)
Richard P. Usatine (Family Medicine)

2001
George Leddy (Geography, International Development Studies)
Sandra Mano (Writing Programs)
L. Jean Perry (Molecular, Cell, and Developmental Biology)

2002
Steven Hardinger (Chemistry and Biochemistry)
Colleen K. Keenan (Nursing)
Cynthia Merrill (Writing Programs)

2003
Marjorie A. Bates (Chemistry and Biochemistry)
Anita McCormick (Writing Programs)
Richard Stevenson III (Dentistry)

2004
Andrew Hsu (Philosophy)
Kimberly Jansma (French and Francophone Studies)
Jennifer Westbay (Writing Programs)

2005
Susan Griffin (Writing Programs)
William Grisham (Psychology)
Anahid Keshishian (Near Eastern Languages and Cultures)

2006
Roger E. Bohman (Molecular, Cell, and Developmental Biology)
Jo Ann Damron-Rodriguez (Social Welfare)
Gerald Wilson (Ethnomusicology)

2007
Nancy Ezer (Near Eastern Languages and Cultures)
Fred A. Hagigi (Health Services)
Eric Marin (Film, Television, and Digital Media)
2008
Leigh C. Harris (Writing Programs)
Chi Li (Ethnomusicology)
Robert B. Trelease (Pathology and Laboratory Medicine)
2009
Brent Corbin (Physics and Astronomy)
Laurence Lavelle (Chemistry and Biochemistry)
Fariba Younai (Dentistry)
2010
Patrick D. Goodman (Law)
Amy H. Kaji (Medicine)
Rory M. Kelly (Film, Television, and Digital Media)
2011
Latifeh E. Hagigi (Near Eastern Languages and Cultures)
Dario Nardi (Anthropology)
John (Jay) Phelan (Life Sciences Core Curriculum)
2012
Stuart Biegel (Education)
Ronald Cooper (Integrative Biology and Physiology)
Michael Lazarus (Medicine)
2013
Randall J. Fallow (Writing Programs)
Ganna Kudyma (Slavic Languages and Literatures)
Joan R. Schleper (Nursing)
2014
Teddi L. Chichester (Writing Programs)
Robert F. Foster (Management)
Mitchem A. Huehls (English)
2015
Mary Paige Greene (Mathematics)
Eric H. Sussman (Management)
Pavel Wonsowicz (Law)
2016
Ting-Ling Chang (Dentistry)
Gregory J. Robinson (Writing Programs)
Jeremy D. Smoak (Near Eastern Languages and Cultures)
2017
Mary F. Corey (History)
Benjamin James Lewis (Linguistics)
Jason D. Napolitano (Medicine)

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1988-90
Patricia M. Greenfield (Psychology)
1990-92
Jeffrey C. Alexander (Sociology)
1992-94
J. William Schopf (Earth and Space Sciences)
1994-96
Albert R. Braunmuller (English)
1996-98
Peter M. Narins (Physiological Science)
1998-00
Robert B. Goldberg (Molecular, Cell, and Developmental Biology)
2000-02
Utpal Banerjee (Molecular, Cell, and Developmental Biology)
2002-04
Richard B. Kaner (Chemistry and Biochemistry)
2004-06
Andrea M. Ghez (Physics and Astronomy)
2006-08
Robert N. Watson (English)
2007-09
William J. Kaiser (Electrical Engineering)
2008-10
Alicia Gaspar de Alba (Chicana and Chicano Studies)
2009-11
Robin L. Garrell (Chemistry and Biochemistry)
2010-12
David H. Gere (World Arts and Cultures)
2011-13
Matthew D. Lieberman (Psychology)
2012-14
Kevin B. Terraciano (History)
2013-15
Luisa M. Iruela-Arispe (Molecular, Cell, and Developmental Biology)
2014-16
Brenda Stevenson (History)
2015-17
Neil K. Garg (Chemistry and Biochemistry)
2016-18
Charlene Villaseñor Black (Art History)
2017-19
Daniel T. Blumstein (Ecology and Evolutionary Biology)
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